

Purchasing Receipts

PO No	Supplier Item No	Line Ref Item No	Rel Terms	Purchased Item	Description	For Part No	Project ID	Equipment Order Qty	Due Date	Received Quantity	Accounting Job No	Container No	Status	Receive Date	Price/Unit	Aging Past Due Days	Total	Supplier Name
P0041674	ACI001-VC	1	1 Net 30	M6061T6B1.250X4.500	6061-T6 Bar: 1.25 X 4.50 : MATERIAL: 6061-T6/T6510/T6511/T62 ALUMINUM BAR PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117/4128/4115/4116 OR QQ-A-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221 receive ft			12	11/21/2018		12	S131147	Stock	11/23/2018	\$ 34.79 / ft	0	\$417.50	Acier Ouellette Inc.
		2		M6061T6B1.750X1.750	6061-T6 Bar: 1.750 X 1.750 : MATERIAL: 6061-T6/T6510/T6511/T62 ALUMINUM BAR PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117/4128/4115/4116 OR QQ-A-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221 receive ft			12				S131148	Stock	11/23/2018	\$ 14.25 / ft	0	\$170.56	Acier Ouellette Inc.
		10		M6061T6R1.875	6061-T6 Round Bar 1.875": MATERIAL: 6061-T6/T6510/T6511/T62 ALUMINUM ROUND BAR AS PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117 4128/4115/4116 OR QQ-A-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B221 OR ASTM B221 receive ft			12				S131149	Stock	11/23/2018	\$ 18.75 / ft	0	\$225.00	Acier Ouellette Inc.
		11		M6061T6R2.750	6061-T6 Round Bar 2.750": MATERIAL: 6061-T6/T6510/T6511/T62 ALUMINUM ROUND BAR AS PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117 4128/4115/4116 OR QQ-A-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B221 OR ASTM B221 receive ft			20				S131150	Stock	11/23/2018	\$ 22.65 / ft	0	\$453.05	Acier Ouellette Inc.

PO No	Supplier	Line Item No	Rel Item No	Supplier Terms	Purchased Item	Description	For Part No	Project	Equipment ID	Order Qty	Due Date	Received Quantity	Accounting Job No	Container No	Status	Receive Date	Price/Unit	Aging Past Due Days	Total	Supplier Name	
		15			MT-4140QT-R0.375	AISI 4140 Quenched & Tempered Steel Round Bar 0.375" Dia. , AISI 4140 Q&T Round Bar ; MATL: AISI 4130 QUENCHED & TEMPERED ROUND BAR AS PER ASTM A4140 QT OR ASTM A4142 QT				12	11/23/2018	12	S131151	Stock	11/23/2018	\$ 31.96 / ft	4	\$383.52	Aacier Ouellette Inc.		
		18			MT-1144-R4.000	AISI 1144 Stressproof Round Bar 4.000" ; MATERIAL: AISI 1144 STRESSPROOF STEEL ROUND BAR ASTM A311 or UNS G11440				10		10	S131152	Stock	11/23/2018	\$ 54.81 / ft	4	\$548.06	Aacier Ouellette Inc.		
		19			MT-1144-R5.000	AISI 1144 Stressproof Round Bar 5.000" ; MATERIAL: AISI 1144 STRESSPROOF STEEL ROUND BAR ASTM A311 or UNS G11440				4	11/21/2018	4	S1311442	Stock	11/26/2018	\$ 397.16 / ft	1	\$1,588.65	Aacier Ouellette Inc.		
		20			MT-4140-S-2.000X4.000	Steel Plate : MATL: AISI 4140 / 4142 STEEL SHEET OR PLATE MINIMUM ROCKWELL C = 28 Rc MAXIMUM ROCKWELL C = 32 Rc ASTM A829, AMS 6395 receive ft				8		8	S131153	Stock	11/23/2018	\$ 98.13 / ft	4	\$785.00	Aacier Ouellette Inc.		
		21			MT-4140-S-1.500X2.000	4140 Steel Bar 1.500 X 2.000 ; MATL: AISI 4140 / 4142 STEEL SHEET OR PLATE MINIMUM ROCKWELL C = 28 Rc MAXIMUM ROCKWELL C = 32 Rc ASTM A829, AMS 6395 receive ft				8		8	S131154	Stock	11/23/2018	\$ 48.13 / ft	4	\$385.00	Aacier Ouellette Inc.		
		22			MT-A513-T-5.250W0.375	ASTM A513 Type 5 Alloy Steel Round Tubing 5.250 Dia. 0.375 Wall				12		12			\$132038	Stock	11/27/2018	\$ 103.75 / ft	0	\$1,245.00	Aacier Ouellette Inc.
		26			MT-4140QT-R9.000	AISI 4140 Q&T Round Bar 9.000" Dia.				2		2			S131155	Stock	11/23/2018	\$ 724.60 / ft	4	\$1,630.36	Aacier Ouellette Inc.
																			\$5,912.67		
															Total:	112	112				



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

**PURCHASE ORDER
PO041674**

E-MAILED
NOV 09 2018

Supplier:	ACI001-VC Acler Ouellette Inc. 935 Boul. Du Havre Valleyfield QC J6S 5L1 Canada Phone: 800 667 4248 Fax: 450 377 5696	PO No:	PO041674
Ship To:	1270 Aberdeen Street Hawkesbury ON K6A 1K7 Canada Phone: 613-632-5200	PO Date:	11/9/18
		Due Date:	11/15/18
		Purchase Order Revision:	
		Revision Date:	
		Ship-To Contact:	Lavoie, Chantal Phone: clavoie@dartaero.com
		Via:	Ground
		Pymt Terms:	Net 30
		Freight Terms:	
		Special Comments: extra charge for palette quote no: SOU0144781	

Items												
Line Item	Job	Part	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1		M6061T6B1.250X4.500		6061-T6 Bar 1.25 X 4.50 : MATERIAL: 6061- T6/T651/T6510/T6511/T62 ALUMINUM BAR PER QQ-A-225/8 OR AMS-QQ- A-225/8 OR AMS 4117/4128/4115/4116 OR QQ-A-200/8 OR AMS-QQ- A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221 receive ft	Firmed	-	11/9/18	12 ft	0 ft	12 ft	\$34.791666/ft	\$417.50
2		M6061T6B1.750X1.750		6061T6 Bar 1.750 X 1.750 : MATERIAL: 6061- T6/T651/T6510/T6511/T62 ALUMINUM BAR PER QQ-A-225/8 OR AMS-QQ- A-225/8 OR AMS 4117/4128/4115/4116 OR QQ-A-200/8 OR AMS-QQ- A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221 receive ft	Firmed	-	11/15/18	12 ft	0 ft	12 ft	\$14.246666/ft	\$170.96
3		M6061T6B0.375X1.000		6061T6 Bar .375 X 1.00 : MATERIAL: 6061- T6/T651/T6510/T6511/T62 ALUMINUM BAR PER QQ-A-225/8 OR AMS-QQ- A-225/8 OR AMS 4117/4128/4115/4116 OR QQ-A-200/8 OR AMS-QQ- A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221 receive ft	Firmed	-	11/15/18	20 ft	0 ft	20 ft	\$1.575/ft	\$31.50



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Items												
Line Item	Job	Part	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
4		M6061T6B0.750X06.000		6061T6 Bar .750 X 6.00 : MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117/4128/4115/4116 OR QQ-A-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221 receive ft	Firmed	-	11/15/18	24 ft	✓ 24 ft	At 18/11/14	\$20.355/ft	\$488.52
5		M6061T6B1.000X1.000		6061T6 Bar 1.000 X 1.000 : MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117/4128/4115/4116 OR QQ-A-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221 receive ft	Firmed	-	11/15/18	24 ft	✓ 24 ft	At 18/11/14	\$4.1158333/ft	\$98.78
6		M6061T6B2.000X01.250		6061-T6 Bar 2.00 X 1.25 : MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117/4128/4115/4116 OR QQ-A-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221 receive ft	Firmed	-	11/15/18	36 ft	✓ 36 ft	At 18/11/14	\$10.318/ft	\$371.45
7		M6061T6R1.000		Round Bar 1.00" : MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM ROUND BAR AS PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117 4128/4115/4116 OR QQ-AA-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B221 OR ASTM B221 receive ft	Firmed	-	11/15/18	40 ft	0 ft	40 ft	\$3.015/ft	\$120.60
8		M6061T6R1.250		6061-T6 Round Bar 1.250 : MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM ROUND BAR AS PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117 4128/4115/4116 OR QQ-AA-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B221 OR ASTM B221 receive ft	Firmed	-	11/15/18	40 ft	0 ft	40 ft	\$4.697/ft	\$187.88



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Items												
Line Item	Job	Part	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
9		M6061T6R0.500		6061-T6 Round Bar .500" : MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM ROUND BAR AS PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117 4128/4115/4116 OR QQ-AA-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B221 OR ASTM B221 receive ft	Firmed	-	11/15/18	20 ft	0 ft ✓ 20 ft	20 ft	\$0.8085/ft	\$16.17
10		M6061T6R1.875		6061-T6 Round Bar 1.875" : MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM ROUND BAR AS PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117 4128/4115/4116 OR QQ-AA-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B221 OR ASTM B221 receive ft	Firmed	-	11/15/18	12 ft	0 ft ✓ 12 ft	12 ft	\$18.75/ft	\$225.00
11		M6061T6R2.750		6061-T6 Round Bar 2.750" : MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM ROUND BAR AS PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117 4128/4115/4116 OR QQ-AA-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B221 OR ASTM B221 receive ft	Firmed	-	11/15/18	20 ft	0 ft ✓ 20 ft	20 ft	\$18.75/ft	\$375.00
Line Item Note: NOTE CUT BAR IN SECTION OF 10 FT												
12		M6061T6S.500		6061-T6 0.500 Sheet : MATERIAL: 6061-T6/T62 ALUMINUM SHEET AS PER QQ-A-250/11 OR AMS-QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209 receive sf	Firmed	-	11/15/18	16 sf	0 sf ✓ 16 sf	16 sf	\$29.8875/sf	\$478.20
Line Item Note: 1 PCS 48" X 48"												
13		M304R1.000		304 Round Bar 1.00 : MATERIAL: AISI 304/316 SS ROUND BAR AS PER ASTM A276 NOTE: AISI 303 NOT ACCEPTABLE receive ft	Firmed	-	11/15/18	36 ft	0 ft ✓ 41 ft	36 ft	\$12.654416/ft	\$455.56
14		M304R0.375		304 Round Bar 0.375 : MATERIAL: AISI 304/316 SS ROUND BAR AS PER ASTM A276 NOTE: AISI 303 NOT ACCEPTABLE receive ft	Firmed	-	11/15/18	12 ft	0 ft ✓ 13.08 ft	12 ft	\$1.2558333/ft	\$15.07



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Line Item	Job	Part	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
16 AT		MT-4140QT-R0.375		AISI 4140 Quenched & Tempered Steel Round Bar 0.375" Dia. : AISI 4140 Q&T Round Bar : MAT'L: AISI 4130 QUENCHED & TEMPERED ROUND BAR AS PER ASTM 4140 QT OR ASTM 4142 QT	Firmed -		11/23/18	12 ft	0 ft	12 ft	\$31.96/ft	\$383.52
16 AT		MT-4140QT-R0.875		AISI 4140 Quenched & Tempered Steel Round Bar 0.875" Dia. : AISI 4140 Q&T Round Bar : MAT'L: AISI 4130 QUENCHED & TEMPERED ROUND BAR AS PER ASTM 4140 QT OR ASTM 4142 QT	Firmed -		11/15/18	20 ft	0 ft	20 ft	\$4.2115/ft	\$84.23
Line Item Note: note cut bar in section 10 ft												
17 AT		MT-4140QT-R4.500		AISI 4140 Quenched & Tempered Steel Round Bar 4.500" Dia. : MATERIAL: AISI 4140 QUENCHED & TEMPERED STEEL ROUND BAR SPECIFICATION: ASTM 4140 QT or ASTM 4142 QT	Firmed -		11/15/18	5 ft	0 ft	5 ft	\$79.466/ft	\$397.33
18 AT		MT-1144-R4.000		AISI 1144 Stressproof Round Bar 4.000" : MATERIAL: AISI 1144 STRESSPROOF STEEL ROUND BAR ASTM A311 or UNS G11440	Firmed -		11/23/18	8 ft	0 ft	8 ft	\$98.125/ft	\$785.00
19 AT		MT-1144-R5.000		AISI 1144 Stressproof Round Bar 5.000" : MATERIAL: AISI 1144 STRESSPROOF STEEL ROUND BAR ASTM A311 or UNS G11440	Firmed -		11/15/18	4 ft	0 ft	4 ft	\$397.1625/ft	\$1,588.65



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Items												
Line Item	Job	Part	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
20		MT-4140-S-2.000X4.000		Steel Plate : MAT'L: AISI 4140 / 4142 STEEL SHEET OR PLATE MINIMUM ROCKWELL C = 28 Rc MAXIMUM ROCKWELL C = 32 Rc ASTM A829, AMS 6395 receive ft	Firmed -		11/15/18	8 ft	0 ft	8 ft	\$98.125/ft	\$785.00
									1 8ft			At 18/11/23
21		MT-4140-S-1.500X2.000		4140 Steel Bar 1.500 X 2.000 : MAT'L: AISI 4140 / 4142 STEEL SHEET OR PLATE MINIMUM ROCKWELL C = 28 Rc MAXIMUM ROCKWELL C = 32 Rc ASTM A829, AMS 6395 receive ft	Firmed -		11/15/18	8 ft	0 ft	8 ft	\$48.125/ft	\$385.00
									1 8ft			At 18/11/23
22		MT-A513-T- 5.250W0.375		ASTM A513 Type 5 Alloy Steel Round Tubing 5.250 Dia, 0.375 Wall	Firmed -		11/15/18	8 ft	0 ft	8 ft	\$103.75/ft	\$830.00
									1 12ft			At 18/11/23
23		MT-O1-B-0.375X0.500		Tool Steel Bar 0.375" X 0.500"	Firmed -		11/15/18	6 ft	0 ft	6 ft	\$21.08333/ft	\$126.50
24		MT-O1-R0.375		Tool Steel Round Bar 0.375 dia.	Firmed -		11/15/18	6 ft	0 ft	6 ft	\$4.866666/ft	\$29.20
25		M304S11GA		304/316 0.125 Sheet : MATERIAL: AISI 304/316 SS SHEET ANNEALED AS PER MIL-S-5059 OR AMS 5513 (304) OR AMS 5524 (316) OR ASTM A240 OR ASME SA240	Firmed -		11/15/18	32 sf	0 sf	32 sf	\$15.5375/sf	\$497.20
									32sf			At 18/11/23
26		MT-4140QT-R9.000		AISI 4140 Q&T Round Bar 9.000" Dia.	Firmed -		11/15/18	2.25 ft	0 ft	2.25 ft	\$724.60444/ft	\$1,630.36
												At 18/11/23

Line Item Note 6 pcs of 4.50"

Grand Total: \$10,974.18

Order Notes

Procurement Quality Clauses

- A005 right of entry
- A012 chemical and physical test report
- A016 personnel qualification
- A017 raw material identification (as applicable)
- A026 certification of material conformance
- A041 quality management system
- A042 dart notification by supplier
- A043 retention of quality documents
- A048 counterfeit parts avoidance, detection, mitigation and disposition program
- A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 11/9/18 1:12 PM dart.lavoie.chantal

**ACIER OUELLETTE INC.**

935, Boul. du Hâvre
 Salaberry de Valleyfield (Québec) J6S 5L1
 Tél.: 450-377-4248 Mtl: 514-336-4248 Ext.: 800-667-4248
 Fax: 450-377-5696 Mtl: 514-336-4246 Ext.: 866-456-4242

Quotation

SOU0144781

Billed to

DART AEROSPACE LTD
 1270, ABERDEEN ST.
 HAWKESBURY, Ontario, K6A 1K7

Shipped to

1270, ABERDEEN ST.
 HAWKESBURY, Ontario, K6A 1K7

Att : PATRICK LUSSIER Tél.: (613) 632-5200 X 730

Customer N° CLI0001056**Date** 2018/11/06**Revision N°** 0**Prices valid until** 2018/11/13**Your Order N°****Processed by** Josianne Bourdon**Salesman** DENIS**Carrier** OUELLE SDV**Credit Terms** Net 30 Days**Page** 1

Product N° and description	Weight	Qty	U/M	Qty	U/M	Price	Pcs Nb	Price	Amount
FLAT ALU 1 1/4 X 4 1/2 6061-T6 NS FAL-114412 9693 1 X 12' 3-4 DAYS	79.38	12.00	PI_\$CLB	12.00	UN		1.00	417.500	417.50
FLAT ALU 2 X 6 6061-T6 N 1 X 12' STOCK	0.00	12.00	UN	12.00	UN		1.00	3 540.000	3 540.00
SQUARE ALU 1 3/4 6061-T6 RANDOM NS CAL-134-V 8670 1 X 12' 2-3 DAYS	43.18	12.00	PI_\$CLB	12.00	UN		1.00	170.960	170.96
FLAT ALU 3/8 X 1 6061-T6 * FAL-381 2613 1 X 20' STOCK	9.00	20.00	PI_\$CLB	20.00	PI		1.00	31.500	31.50
FLAT ALU 1/8 X 3/4 6063-T5 * FAL-1834 2552 5 X 21' STOCK	11.87	105.00	PI_\$CLB	105.00	PI		5.00	8.306	41.53
FLAT ALU 3/4 X 6 6061-T6 * FAL-346 2601 2 X 12' STOCK	126.89	24.00	PI_\$CLB	24.00	PI		2.00	244.260	488.52
SQUARE ALU 1 6061-T6 * CAL-1 1781 2 X 12' STOCK	28.22	24.00	PI_\$CLB	24.00	PI		2.00	49.390	98.78
FLAT ALU 1 1/4 X 2 6061-T6 * FAL-1142 2456 3 X 12' STOCK	105.84	36.00	PI_\$CLB	36.00	PI		3.00	123.816	371.45
ROUND ALU 1 6061-T6 * RAL-1 5141 2 X 20' STOCK	37.00	40.00	PI_\$CLB	40.00	PI		2.00	60.300	120.60
ROUND ALU 1 1/4 6061-T6 * RAL-114 5121 2 X 20' STOCK	57.64	40.00	PI_\$CLB	40.00	PI		2.00	93.940	187.88

Date :

Next Page...

**ACIER OUELLETTE INC.**

935, Boul. du Havre
 Salaberry de Valleyfield (Québec) J6S 5L1
 Tél.: 450-377-4248 Mtl: 514-336-4248 Ext.: 800-667-4248
 Fax: 450-377-5696 Mtl: 514-336-4246 Ext.: 866-456-4242

Quotation

SOU0144781

Billed to

DART AEROSPACE LTD
 1270 , ABERDEEN ST.
 HAWKESBURY, Ontario, K6A 1K7

Shipped to

1270 , ABERDEEN ST.
 HAWKESBURY, Ontario, K6A 1K7

Att : PATRICK LUSSIER Tél.: (613) 632-5200 X 730

Customer N° CLI0001056**Date** 2018/11/06**Revision N°** 0**Prices valid until** 2018/11/13**Your Order N°****Processed by** Josianne Bourdon**Salesman** DENIS**Carrier** OUELLE SDV**Credit Terms** Net 30 Days**Page** 2

Product N° and description	Weight	Qty	U/M	Qty	U/M	Price	Pcs Nb	Price	Amount
ROUND ALU 1/2 6061-T6 * RAL-12 5127 1 X 20' STOCK	4.62	20.00	PI_\$CLB	20.00	PI		1.00	16.170	16.17
ROUND ALU 1.875 6061-T6 N 1 X 12' 2-3 DAYS	0.00	1.00	UN	1.00	UN		1.00	225.000	225.00
ROUND ALU 2 3/4 6061-T6 * RAL-234 5148 1 X 20' 2-3 DAYS	139.40	20.00	PI_\$CLB	20.00	PI		1.00	453.050	453.05
ALU PLATE 1/2 6061-T651 RANDOM PAL-126061-V 4229 1 PL. 48" X 48" STOCK	116.00	16.00	PI2_\$CLB	16.00	PI2		1.00	478.200	478.20
SAW CUT SCIE 1		1.00	UN	1.00					
ROUND SS 1 304 (R) RSS-1 5747 3 X 12' R/L STOCK	96.12	36.00	PI_\$CLB	36.00	PI		3.00	151.853	455.56
ROUND SS 3/8 304 (R) RSS-38 5768 1 X 12' R/L STOCK	4.51	12.00	PI_\$CLB	12.00	PI		1.00	15.070	15.07
FLAT 1 1/4 X 3 * F-1143 2133 1 X 10' STOCK	127.50	10.00	PI_\$CLB	10.00	PI		1.00	132.340	132.34
SAW CUT SCIE 1		1.00	UN	1.00					
ROUND 4140 HEAT TREAT 3/8 NS R4140-38H 9446 1 X 12' 7-10 DAYS	4.51	12.00	PI_\$CLB	12.00	UN_\$UN	31.96			383.52

Date :

Next Page...

**ACIER OUELLETTE INC.**

935, Boul. du Havre
Salaberry de Valleyfield (Québec) J6S 5L1
Tél.: 450-377-4248 Mtl: 514-336-4248 Ext.: 800-667-4248
Fax: 450-377-5696 Mtl: 514-336-4246 Ext.: 866-456-4242

Quotation

SOU0144781

Billed to

DART AEROSPACE LTD
1270 , ABERDEEN ST.
HAWKESBURY, Ontario, K6A 1K7

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HAWKESBURY, Ontario, K6A 1K7

Att : PATRICK LUSSIER Tél.: (613) 632-5200 X 730

Customer N° CLI0001056**Date** 2018/11/06**Revision N°** 0**Prices valid until** 2018/11/13**Your Order N°****Processed by** Josianne Bourdon**Salesman** DENIS**Carrier** OUELLE SDV**Credit Terms** Net 30 Days**Page** 3

Product N° and description	Weight	Qty	U/M	Qty	U/M	Price	Pcs Nb	Price	Amount
ROUND 4140 HEAT TREAT 7/8 (R) R4140-78H 4997 1 X 20' R/L STOCK	40.90	20.00	PI_\$CLB	20.00	PI		1.00	84.230	84.23
ROUND 4140 ANNEALED 4 1/2 (R) R4140-412A 4957 1 X 5' DC STOCK	277.95	5.00	PI_\$CLB	5.00	PI		5.00	79.466	397.33
ROUND 4140 HEAT TREAT 9 NS R4140-9H 9642 6 X 4 1/2" 7-10 DAYS	486.68	2.25	PI_\$CLB	2.25	UN_\$UN		6.00	271.726	1 630.36
ROUND STRESSPROOF 4 (R) RST-4 5820 1 X 10' STOCK	427.20	10.00	PI_\$CLB	10.00	PI		1.00	548.060	548.06
SAW CUT SCIE 1		1.00	UN	1.00					
ROUND STRESSPROOF 5 RANDOM NS RST-5-V 9054 1 X 4' 7-10 DAYS	267.00	4.00	PI_\$CLB	4.00	UN_\$UN		1.00	1 588.650	1 588.65
PLAT 2.0 X 4.0 4140 N 1 X 8' 7-10 DAYS	0.00	1.00	UN	1.00	UN		1.00	785.000	785.00
PLAT 1.5 X 2.0 4140 N 1 X 8' 7-10 DAYS	0.00	1.00	UN	1.00	UN		1.00	385.000	385.00
MECH TUBE 5.25 X .375W A-513 N 1 X 8' 3-5 DAYS	0.00	1.00	UN	1.00	UN		1.00	830.000	830.00
PLAT 3/8 X 1/2 0-1 N 2 X 3' 3-5 DAYS	0.00	2.00	UN	2.00	UN		2.00	63.250	126.50

Date :

Next Page...

**ACIER OUELLETTE INC.**

935, Boul. du Hâvre
 Salaberry de Valleyfield (Québec) J6S 5L1
 Tél.: 450-377-4248 Mtl: 514-336-4248 Ext.: 800-667-4248
 Fax: 450-377-5696 Mtl: 514-336-4246 Ext.: 866-456-4242

Quotation

SOU0144781

Billed to

DART AEROSPACE LTD
 1270 , ABERDEEN ST.
 HAWKESBURY, Ontario, K6A 1K7

Shipped to

1270 , ABERDEEN ST.
 HAWKESBURY, Ontario, K6A 1K7

Att : PATRICK LUSSIER Tél.: (613) 632-5200 X 730

Customer N° CLI0001056
Date 2018/11/06
Revision N° 0
Prices valid until 2018/11/13
Your Order N°
Processed by Josianne Bourdon
Salesman DENIS
Carrier OUELLE SDV
Credit Terms Net 30 Days
Page 4

Product N° and description	Weight	Qty	U/M	Qty	U/M	Price	Pcs Nb	Price	Amount
ROND 3/8 0-1 N 2 X 3' 3-5 DAYS	0.00	2.00	UN	2.00	UN		2.00	14.600	29.20
SHEET SS 11G SS304-2B (4 X 8) FESS-11G483042B 3402 1 X 4' X 8' STOCK	168.00	32.00	PI2_\$CLB	1.00	UN		1.00	497.200	497.20
PALETTE PALETTE 7573	0.00	1.00	UN_\$UN	1.00	UN		1.00	40.000	40.00
FUEL CHARGE FRAIS_ENERGETIQUE NOTE : ATTENTION: MILL TEST REQUIS			\$						3.95

Total Weight (Lbs) 2 659.41

Important

This offer is based on the availability, the price of material can change without notice in function of the evolution of the current market prices and international importation fees.
 This offer is subject to credit approval.

Approuved and Accepted by : _____

Date : _____

Sub-total 14 573.11
 TVH-13 1894.50

Total (\$CAD) 16 467.61

Chantal Lavoie

From: Chantal Lavoie
Sent: Tuesday, November 06, 2018 1:35 PM
To: 'Denis Quenneville'
Subject: quote

Good afternoon Denis,
Please advise price on delivery on mat'l.

6061-t6 bar 1.250" x 4.5" x 12 ft
6061-t6 bar 6" x 2" x 12 ft
6061-t6 bar 1.750" x 1.750" x 12 ft
6061-t6 bar 0.375" x 1" x 12 ft
6061-t6 bar 0.750" x 0.125" x 100 ft
6061-t6 bar 0.750" x 6" x 24 ft
6061-t6 bar 1" x 1" x 24 ft
6061-t6 bar 2" x 1.250" x 36 ft

6061-t6 round bar 1" x 24 ft
6061-t6 round bar 1.250" x 24 ft
6061-t6 round bar 0.500" x 12 ft
6061-t6 round bar 1.875" x 12 ft
6061-t6 round bar 2.750" x 12 ft

6061-t6 sheet 0.500" x 1 pcs of 4 ft x 4 ft

304 round bar 1" x 36 ft
304 round bar 0.375" x 12 ft

Hrs bar 1.250" x 2.5" x 8 ft

4140 qt round bar 0.375" x 12 ft
4140 qt round bar 0.875" x 12 ft
4140 round bar 4.5" x 3 ft
4140 qt round bar 9" x cut to size 4.50" x 6 pes

1144 round bar 4" x 6 ft
1144 round bar 5" x 4 ft

4140 bar 2" x 4" x 8 ft
4140 bar 1.5" x 2" x 8 ft

A513 round tubing 5.250" x 0.375" x 12 ft

01 bar 0.375" x 0.500" x 6 ft

01 round bar 0.375" x 6 ft

304 sheet 11ga x 32 sf

Thanks
Chantal

Chantal Lavoie
Purchasing Coordinator

DART AEROSPACE
T 1 613 632-5200
F 1 613 632-1053
E clavoie@dartaero.com
1 800 556- 4166
www.dartaerospace.com



ACIER OUELLETTE INC.

935, Boul. du Havre
 Salaberry Valleyfield (Québec) J6S 5L1
 Tél.: 450-377-4248 Mtl: 514-336-4248 Ext.: 800-667-4248
 Fax: 450-377-5696 Mtl: 514-336-4246 Ext.: 866-456-4242

DELIVERY - CLIENT

CO00120092

Billed to
 DART AEROSPACE LTD
 1270 , ABERDEEN ST.
 HAWKESBURY, Ontario, K6A 1K7
 Att : LUSSIER Tél.: (613) 632-5200 X 730
Instruction F-M
Delivery Route 5
 + stressproof
 + drop not delivered

Product Description	Weight	Qty	UM	PCS NB			Internal Use Only				
				CMD	EXP	B/O	IN	I	S	C	OUT
1 FLAT ALU 1 1/4 X 4 1/2 6061-T6 NS FAL-114412 1 X 12' HEAT: 05281804 AC21531-7HY-14/11	9693	79.38	12.00	PL_\$CLB		1 X 12'					
2 SQUARE ALU 1 3/4 6061-T6 RANDOM NS CAL-134-V 1 X 12' HEAT 894382 AC21549-RV-14/11	8670	43.18	12.00	PL_\$CLB		1 X 12'					
3 ROUND ALU 1 7/8 6061-T6 NS RAL-1178 12192 1 X 12' Heat 200227259 AC21531-7HY-14/11	38.92	38.92	12.00	PL_\$CLB		1 X 12'					
4 ROUND ALU 2 3/4 6061-T6 * RAL-234 1 X 20' HEAT 568150109 TRANSIT ST-JEROME LE 14/11	5148	139.40	20.00	PL_\$CLB		1 X 20'					
5 ROUND STRESSPROOF 4 (R) RST-4 5820 1 X 10' HEAT A140456 TRANSIT ST-JEROME LE 14/11		427.20	10.00	PL_\$CLB		1 X 10'					
6 TUBE MEC 5.250 OD X .375 NS TME-5250375 12191 1 X 12' HEAT 0110119 AC21532-JG-21/11		234.24	12.00	PL_\$PI		1 X 12'					
SAW CUT											

DELIVERY - CLIENT

CO00120092

Product Description		Qty	Weight	UM	PCS NB			Internal Use Only				
					CMD	EXP	B/O	IN	I	S	C	OUT
7	FLAT GRD STOCK 01 3/8 X 1/2 NS											
FO1-3812	10918	B/0	3.83	6.00	PI							
2 X 3' HEAT												
AC21534-FU-14/11												
8	ROUND 01 - 3/8 NS											
ROI-38	12194	B/0	2.26	6.00	PI	\$CLB						
2 X 3' HEAT												
AC21534-FU-14/11												

Note : ATTENTION: MILL TEST REQUIS

Conditions :

All sold and delivered materials remain the property of "Acer Ouellette Inc" until payment is made in full, complete and cashed. All lost materials are at the buyer's expense. The warranty offered by "Acer Ouellette Inc." is the same as offered and honored by the manufacturer and his warranty is transferred by "Acer Ouellette Inc." to the client. The buyer hereby accepts to respect the following conditions: Net 30 days from billing date and the buyer accepts to pay administration charges of 2% per month (24% per annum) on all past due amounts over 30 days. Any default in respect with this contract will lead to payment by acceleration and permits to the seller, at his choice to claim for the balance due or the repossession of the goods sold. All claims must be made within five (5) days with this document enclosed. Any merchandise that has been damaged, cut or modified cannot be returned. All goods returned must be with our authorization and are subject to a 25% restocking charge.

Total Weight (Lbs) : 968.41

NIR : R-109516-6

Prepared By :	Verified By :
---------------	---------------

Delivered By :	Time
----------------	------

Customer's Signature	Date
----------------------	------

Y	M	D
18	11	23

**ACIER OUELLETTE INC.**

935, Boul. du Havre

Salaberry de Valleyfield (Québec) J6S 5L1

Tél.: 450-377-4248 Mtl: 514-336-4248 Ext.: 800-667-4248

Fax: 450-377-5696 Mtl: 514-336-4246 Ext.: 866-456-4242

DELIVERY - CLIENT

Cain

CO00120175

Billed to		Shipped to		Customer N°		Customer N°							
Instruction	F/M	Delivery Route	5	Date	2018/11/12	Delivery date	2018/11/26						
				Your order N°	041674	Processed by	Josianne Bourdon						
				Salesman		Carrier	OUELLETTE VALLEYFIELD						
				Credit Termes		Credit Termes	Net 30 Days						
Product Description		Weight	Qty	UM	PCS NB	Internal Use Only							
1	ROUND 4140 HEAT TREAT 3/8 NS	9446	4.51	12.00	PI_\$CLB	CMD	EXP	B/O	IN	I	S	C	OUT
R4140-38H	1 X 12' HEAT												
AC21548-CAS-22/11													
Heat: 01537	A												
2	ROUND 4140 HEAT TREAT 9 NS	9642	486.68	2.25	PI_\$CLB								
R4140-9H	6 X 4 1/2" HEAT												
AC21547-EU-21/11													
Heat: 018121	A												
3	PLATE 4140 HEAT TREAT 2 NS	9072	218.12	2.67	PI2_\$CLB								
PA140-2H	1 X 4" X 96" HEAT												
AC21542-FU-21/11													
Heat: 0300536	A												
4	PLATE 4140 HEAT TREAT 1 1/2 NS	8283	2.17	1.33	PI2_\$CLB								
P4140-112H	1 X 8" X 2" HEAT												
AC21547-EU-21/11													
Heat: 0304714	A												
Note : ATTENTION: MILL TEST REQUIS													

100012

Dont

Service Center Metals

5850 Quality Way
Prince George, VA 23875



Can Do.

BILL TO

SHIP TO

MANIFEST NUMBER 371534
CUSTOMER PO 5400404994
CUSTOMER PART NUMBER ALREC00162
Quantity Certified 2,404 lbs
30 pcs

We hereby certify that the material covered by this report has been inspected in accordance with the most recent certification revision, and has been found to meet the applicable requirements described herein, including any specifications forming a part of the 6061-T6511 also meet the requirements of 6061-T6.

All aluminum products supplied by Service Center Metals, LLC contain no functional mercury. Neither mercury nor its compounds are used in the manufacture of aluminum products at our facility. Furthermore, aluminum products supplied by Service Center Metals have not, to the best of our knowledge, contacted any source of mercury.

SCM is ISO 9001-2015 certified

This product is RoHS-2, REACH, and DFARS compliant

Mechanical Properties

Tests Lot No.

1 201811618

Test	Lot No.	Test Date	Ultimate Tensile Strength (KSI)	Yield Strength (KSI)	Percent Elongation		
					min	max	min
		6/25/18	51.50	51.50	47.10	47.10	16.70

CERTIFIED INSPECTION REPORT AND TEST RESULTS FOR EXTRUDED PRODUCTS



OUR ORDER NUMBER	ITEM
953979	7

CERTIFICATION
ASTM-B221-14 Stencil/Cont
SPECIFICATION
SAE AMS-QQA-200/8A Stabilized
SPECIFICATION

RoHS 2011/65/EU Compliant

We hereby certify that the material covered by this report has been inspected in accordance with the most recent certification revision, and has been found to meet the applicable requirements described herein, including any specifications forming a part of the 6061-T6511 also meet the requirements of 6061-T6.

All aluminum products supplied by Service Center Metals, LLC contain no functional mercury. Neither mercury nor its compounds are used in the manufacture of aluminum products at our facility. Furthermore, aluminum products supplied by Service Center Metals have not, to the best of our knowledge, contacted any source of mercury.

Chemical Composition for Aluminum Alloy 6061

Cast #	Lot No.	Alloy	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Al	Others	Each	Total	Melt Source:
05281804	201811618	6061	0.74	0.37	0.35	0.10	0.86	0.08	0.07	0.03	97.40	0.05	0.15	United States of America	

SCM products are melted and extruded in the USA
120012 15/08/2018

Print Date: 6/26/2018

Calvin J. Wiggins, Director of Quality & Technical Services

Rev 3/14/2018

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL 6061 T6/T651/T651D/T651D162 ALUMINUM BAR

SPECIFICATIONS

SPECIFICATION: 00-A-2258 OR AMS-00-A-2258 (OR AMS 4117/4128/4115/4116)
OR QQ-A-2008 OR AMS QQA-2008 (OR AMS 4160)
OR AC-A-2008

BABY MONITOR

M6061T6B 1.777 X | www.wwww
THICK | WIDH

WHERE "T.TTT" = THICKNESS IN INCHES
"WW.WWW" = WIDTH IN INCHES

E.G. 1.0" X 12.0" BAR = M6061T6B1.000X12.000

RELEASED
2009-05-05
AP

1950-00-00
EASE

B		REMOVE QDA-2011 OPTION REFORMAT INC. S. ADD		09 07 13
ASTM B21/B22 (22N 07.1)		CP		
A		NEW ISSUE		05
REV		DESCRIPTION		01 06 08
DESIGN		DS	DATE	
DRAWN		<i>AS</i>	BY	
CHECKED		<i>AS</i>	HAWKESBURG, ONTARIO, CANADA	
MFG. APPR.		<i>AS</i>	DRAWING NO. M606116B	
APPROVED		<i>AS</i>	REV B	
DEA APPR.		<i>AS</i>	SHEET 1 OF 1	
DATE		<i>AS</i>	SCALE	
09 07 13		<i>AS</i>	NTS	

DART AEROSPACE LTD

THE INFLUENCE OF THE ENVIRONMENT ON THE GROWTH OF COTTON 113

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M6061T6B1250x4.500
 DATE: 18/11/23

PO / BATCH NO.: P0041674, S131147

MATERIAL CERT REC'D: Yes
 QUANTITY RECEIVED: 1264
 QUANTITY INSPECTED: 1264
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 1.250"
 THICKNESS RECEIVED: 1.250"
 SHEET SIZE ORDERED: —
 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <u>(N)</u>	
CORRECT FINISH	Y <u>(Y)</u> N	
CORROSION	Y <u>(N)</u>	
CORRECT GRAIN DIRECTION	Y <u>(Y)</u> N	
CORRECT MATERIAL PER M-DRAWING	Y <u>(Y)</u> N	<i>ASTM B21</i>
CORRECT THICKNESS	Y <u>(Y)</u> N	
PHOTO REQUIRED	Y <u>(Y)</u> N	
CORRECT REF # TO LINK CERT	Y <u>(Y)</u> N	<i>HT-05281804</i>
CORRECT MATERIAL IDENTIFICATION	Y <u>(Y)</u> N	
CORRECT M# ON THE MATERIAL	Y <u>(Y)</u> N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <u>(N)</u>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <u>(N)</u>	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING	HRC	HRB	DUR A	DUR D	WEBSTER

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>DAS</u> <u>61</u> <u>9-89</u>	SIGNED OFF BY: _____
DATE: <u>18/11/23</u>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

120092

Dart

21549N

SIGNATURE
ALUMINUM CANADA INC

SIGNATURE ALUMINUM CANADA

1850 CLEMENTS RD
PICKERING, ON L1W 3R8

CERTIFICATE OF COMPLIANCE

Cert Date	Cert No.	Sales Order	Page
02/10/2018	5465480	130941	1
Cust PO	B/L No	Lot	Date
4500861760	035845	894382	02/12/18
Sold To	Ship To		
Item No	Part No	Item Description	Cust Part
001	C-011508-9	12 MILL 6061 T6511	
Gross Weight	1,380	LBS	
Net Qty	1,362	LBS	32 PCS 1 PKGS
Specification	Die Desc		
ASTM B221-13			

Mechanical Tests:

Tensile	Yield			
MPA / KSI	MPA / KSI	% Elongation	Conductivity	HRE
313.8 / 45.5	287.6 / 41.7	17.4	N/A	94

Chemical Analysis:

Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	V	Zr
0.63	0.26	0.22	0.05	0.90	0.07	0.03	0.01	0.01	0.00

This Material is Made in Canada

This Material is RoHS Compliant

This will certify that the material described herein has been inspected and tested in accordance with Signature Aluminum Canada's standard sampling and testing procedures or in accordance with the requirements of any specification forming a part of the material description to the extent indicated herein. Data of chemical composition for the material and test results from samples representative of the material are set forth above hereof or in any attachments hereto. This information shows that the material meets the applicable requirements. Inspection and test records are maintained on file. This certificate shall be deemed apart of and subject to the terms and conditions of warranty set forth on the reverse side of our order acknowledgement form. No other warranties are applicable.

S. Gooder
Quality Manager
Signature Aluminum Canada Inc

Heat: 894382

ISO 9001/TS16949 Registered Company

Visit us at www.signaturealum.com

CERTIFICATION DU MATERIEL

CLIENT:
SALABERRY-DE-VALLEYFIELD

ACIER OUELLETTE INC DIV.DE
935 BOUL DU HAVRE
SALABERRY-DE-VALLEYFIELD, QUEBEC
QC J6S 5L1

NUMÉRO DE COMMANDE: 15086026 000010

COMMANDE DU CLIENT: ac00021549 10

NUMÉRO DE PIÈCES: 8670

NUMÉRO DE LIVRAISON: 803980218 000010

NUMÉRO D'ARTICLE: 160001146

DESCRIPTION INVENTAIRE: SQ EXT 6061 T6511 1.75 X 144

DESCRIPTION ARTICLE FINIS: ALUM Barre SQ EXT 6061 T6511

1.75po X 144po

NUMERO (S) DE COULEE **BRAME / BOBINE / TIN (le cas échéant)**

894382 411066

CERTIFICATION

Un sondage de nos sources matérielles a indiqué que ni le mercure ni des substances radioactives ne sont introduits dans leurs produits ni ne sont utilisés dans aucun de leurs procédés. Alors que nous ne faisons aucun test indépendant pour le mercure ou la radiation, il n'y a rien dans le système de qui pourrait entraîner la contamination de l'un ou l'autre type.

Ce document certifie que le matériel décrit ci-dessus a été expédié conformément à votre commande. Le producteur du matériel a certifié à qu'il a été produit conformément aux spécifications suivantes:

ASTM B221



Thomas Endres

Vice-président - Approvisionnement

11/14/2018

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M6061 T 6 B1.750 x 1.750
 DATE: 18/11/23

PO / BATCH NO.: P0041674/S13148

MATERIAL CERT REC'D: Yes
 QUANTITY RECEIVED: 12ft
 QUANTITY INSPECTED: 12ft
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 1.750"
 THICKNESS RECEIVED: 1.750"
 SHEET SIZE ORDERED: —
 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <u>(N)</u>	
CORRECT FINISH	Y <u>(Y)</u> N	
CORROSION	Y <u>(N)</u>	
CORRECT GRAIN DIRECTION	Y <u>(Y)</u> N	
CORRECT MATERIAL PER M-DRAWING	Y <u>(Y)</u> N	<u>ASTM B201</u>
CORRECT THICKNESS	Y <u>(Y)</u> N	
PHOTO REQUIRED	Y <u>(N)</u>	
CORRECT REF # TO LINK CERT	Y <u>(Y)</u> N	<u>HT: 894382</u>
CORRECT MATERIAL IDENTIFICATION	Y <u>(Y)</u> N	
CORRECT M# ON THE MATERIAL	Y <u>(Y)</u> N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <u>(N)</u>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <u>(N)</u>	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING	HRC	HRB	DUR A	DUR D	WEBSTER

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)	
INSPECTED BY: <u>61</u> <u>9-89</u>	SIGNED OFF BY: _____	
DATE: <u>18/11/23</u>	DATE: _____	

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

10097

Dout

21531 N

(a)

KAISER

ALUMINUM

FABRICATED PRODUCTS

KAISER ALUMINUM
FABRICATED PRODUCTS, LLC
5205 KAISER DRIVE
KALAMAZOO, MI 49048

CERTIFIED TEST REPORT

<http://Online.KaiserAluminum.com>

Brettin Glass

CUSTOMER PO NUMBER:		CUSTOMER PART NUMBER:		PRODUCT DESCRIPTION:							
5400407322-6		ALRD00068		KAISERSELECT PRECISION ROD 1.875+/-0.005							
KAISER ORDER NUMBER:	LINE ITEM:	SHIP DATE:		KAISER LOT NUMBER:	ALLOY:	TEMPER:					
6056577	006	06/25/2018		Z00227259	6061	T6511B					
WEIGHT SHIPPED:	QUANTITY:	B/L NUMBER:		DIAM/DAF/THKNS:	WIDTH:	LENGTH:					
1013.000 LB	26.000 PCS	623233				12.000 FT					
SHIP TO:											
SOLD TO:											

Actual Physical Properties

REFERENCE	DASH#	SAMPLE#	UTS (KSI)	YTS (KSI)	ELONG%	HARDNESS	CONDUCT.	BEND
Z00227259	0001	0001	55.2	52.1	14.7	RE	93	N/A
Z00227259	0001	0002	51.3	47.2	16.1	RE	95	N/A
Z00227259	0001	0003	51.0	47.2	18.6	RE	96	N/A
Z00227259	0001	0004	55.5	52.2	14.5	RE	93	N/A
Z00227259	0001	0005	52.0	48.4	15.7	RE	96	N/A

Chemical Composition (wt%), Aluminum Remainder

LIMITS	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Bi	Zr	Ea	Tot
Maximum	0.80	0.70	0.40	0.15	1.20	0.35	0.25	0.15	NA	NA	NA	0.05	0.15
Minimum	0.40	0.00	0.15	0.00	0.80	0.04	0.00	0.00	NA	NA	NA	0.00	0.00
108678	.78	.27	.31	.10	.95	.09	.05	.02	.00	.00	.00	.01	.04

Applicable Requirements:

PER ASTM-B221 14, STENCILED ASME-SB221 2009 SECT II PER AMS-QQ-A-200/8A UNS# A96061
MEETS ALL SPECIFICATION REQUIREMENTS FOR 6061-T6511/T6 ELEVATED MINIMUM MECHANICAL
PROPERTIES AS FOLLOWS: UTS = 42.0 KSI MIN YIELD = 38.0 KSI MIN ELONGATION = 10.0% MIN

Miscellaneous Notes

MANUFACTURED IN USA MELTED IN USA
MERCURY IS NOT A NORMAL BACKGROUND ELEMENT IN ALUMINUM ALLOYS. NEITHER MERCURY NOR ANY
OF ITS COMPOUNDS ARE UTILIZED BY KAISER ALUMINUM IN THE MANUFACTURE OF THIS MATERIAL.

Z 00227259

KAISER

ALUMINUM

FABRICATED PRODUCTS

KAISER ALUMINUM
FABRICATED PRODUCTS, LLC
5205 KAISER DRIVE
KALAMAZOO, MI 49048

CERTIFIED TEST REPORT

<http://Online.KaiserAluminum.com>

CERTIFICATION

Kaiser Aluminum Fabricated Products, LLC hereby certifies that metal shipped under this order has been inspected and tested and found in conformance with applicable specifications forming a part of the description set forth in Kaiser's sales acknowledgement form. Any warranty is limited to that shown on Kaiser's general terms and conditions of sale. Test reports are on file, subject to examination.

Aimee L. Macnowski, Quality & Technology Manager



SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL M6061-T6/T651/T6510/T6511/T62 ALUMINUM ROUND BAR

SPECIFICATION

QQ-A-225B OR AMS-QQ-A-225B (OR AMS 4174/2B/4154116)
OR QQ-A-2008 OR AMS-QQ-A-2008 (OR AMS 4160)

OR ASTM F2111 OR ASTM B221

M6061T6R[D DDD]

[DIA]

WHERE "DDD" = DIAMETER IN INCHES
EG. 5/8" ROUND BAR = M6061T6R0 625

▲

PART NUMBER

RELEASED
2009-03-09
JH

REF. NAME		REF. NO.	REF. VAR. NO.	REF. DR.	CP	DS	DATE
REV	REV	REV	REV	REV	REV	REV	REV
					09-07-13		
						01-06-09	

DESCRIPTION

DESIGN	DRAWN	CHECKED	MFG. APPR	APPROVED	DE-APPR	DATE

DART AEROSPACE LTD
HAWKSBURY, ONTARIO, CANADA

DRAWING NO. M6061T6R

REV. B SHEET 1 OF 1

SCALE: 1:1
NTS

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MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M606176R1.875
 DATE: 18/11/23

PO / BATCH NO.: P0041674/5131149

MATERIAL CERT REC'D: Yes
 QUANTITY RECEIVED: 12ft
 QUANTITY INSPECTED: 12ft
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 1.875"
 THICKNESS RECEIVED: 1.875"
 SHEET SIZE ORDERED: —
 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <u>N</u>	
CORRECT FINISH	Y <u>N</u>	
CORROSION	Y <u>N</u>	
CORRECT GRAIN DIRECTION	Y <u>N</u>	
CORRECT MATERIAL PER M-DRAWING	Y <u>N</u>	<i>45m B21</i>
CORRECT THICKNESS	Y <u>N</u>	
PHOTO REQUIRED	Y <u>N</u>	
CORRECT REF # TO LINK CERT	Y <u>N</u>	<i>PT: 200227259</i>
CORRECT MATERIAL IDENTIFICATION	Y <u>N</u>	
CORRECT M# ON THE MATERIAL	Y <u>N</u>	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <u>N</u>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <u>N</u>	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING	HRC	HRB	DUR A	DUR D	WEBSTER

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>61</u> <small>9-09</small>	SIGNED OFF BY: _____
DATE: <u>A 18/11/23</u>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in



GLOBAL VIETNAM ALUMINIUM COMPANY
GLOBAL VIETNAM ALUMINIUM
GLOBAL ALUMINIUM

Global Vietnam
Aluminium Co., Ltd

GLOBAL VIETNAM ALUMINIUM COMPANY LIMITED

Address: My Xuan B1-Conac industrial zone, My Xuan town, Tan Thanh district,
Ba Ria-Vung Tau province, Viet Nam

Tel: +84(0)643924954
Fax: +84(0)643924953

MILL TEST CERTIFICATE

Date: June 25th 2015

PO number: 15-P-060

Shipping Ref No.: 15-0421

LC No.: DC.11MN330723

Date of issue: 26 June, 2015

Item Code: 1043702

Die Number: D000020

Alloy & Temper: 6061-T6

Production Description: Round Bar 2.75" x 20"

Length (inch): 240

Quantity (pieces): 7

Bundle number: 15-P-060-016

Heat Number: SXB150109

Lot Number: JY150570F

Date: 28-05-2015

Applicable Specifications: ASTM B221 STANDARDS

CHEMICAL ANALYSIS: %

Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Other		Al	Remark:
								EACH	TOTAL		
0.562	0.132	0.245	0.025	0.906	0.045	0.009	0.020	<0.05	<0.15	98.021	25/05/2015

MECHANICAL ANALYSIS:

Ult. Strength (ksi)	Yield Strength (ksi)	Elongation % LN 2"	Remark:
53.0	48.4	14.5	25/05/2015

All profiles, each profile with each MTC, showing material shipped match aluminium alloy as per standard, with chemical analysis and mechanical analysis to match aluminium alloy standard.

We hereby certify that the item listed have been checked and tested in accordance with the specifications noted and have been found to meet all the applicable requirements. Certifications are kept on file for 36 months from the date of purchase and are available for review upon request, referring to ASTM and the PO number.

Quality Manager

Heat: SXB 150109

PK-34

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M6061T6R2.750
 DATE: 18/11/23

PO / BATCH NO.: P0041674/5131150

MATERIAL CERT REC'D: Yes
 QUANTITY RECEIVED: 20ft
 QUANTITY INSPECTED: 20ft
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 2.750"
 THICKNESS RECEIVED: 2.750"
 SHEET SIZE ORDERED: —
 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <u>N</u>	
CORRECT FINISH	Y <u>N</u>	
CORROSION	Y <u>N</u>	
CORRECT GRAIN DIRECTION	Y <u>N</u>	
CORRECT MATERIAL PER M-DRAWING	Y <u>N</u>	<i>ASTM B221</i>
CORRECT THICKNESS	Y <u>N</u>	
PHOTO REQUIRED	Y <u>N</u>	
CORRECT REF # TO LINK CERT	Y <u>N</u>	<i>HT: SXB/50/09</i>
CORRECT MATERIAL IDENTIFICATION	Y <u>N</u>	
CORRECT M# ON THE MATERIAL	Y <u>N</u>	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <u>N</u>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <u>N</u>	

TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING	CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW				
	HRC	HRB	DUR A	DUR D	WEBSTER

testers located in the Quality Office

QC 18 INSPECTION	61	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>AT</u>	<u>9.88</u>	SIGNED OFF BY: _____
DATE: <u>18/11/23</u>		DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

120175

Dart

21548N



Rodacciai

23842 Bambu Party (LC) - Via Giuseppe Riva 1 - 20131
Tel. +39031871111 - Fax +39031878312
Internet www.bambuparty.com - e-mail info@bambuparty.com

Azienda con sistema di gestione certificato da ISO
secondo UNI EN ISO 9001:2008

The Company's Quality Management System is certified by IQS according to UNI EN ISO 9001:2008

CERTIFICATO DI CONTROLLO Inspection Certif N. 080335 Date 31/05/2018

Secondo According to EN 10204:2004

DESTITUTARIO - Cargo - Receives

CLIQUE - Customer

RODA SPECIALTY STEEL, INC.

RODA SPECIALTY STEEL, INC.

200 LEXINGTON DR
60089 BUFFALO GROVE ILLINOIS

200 LEXINGTON DRIVE
60089 BUFFALO GROVE IL.

ORDINE - Order N. 982061 Date 30/10/2017 D.d.T. - Delivery note N. 06797/13 Date 06/05/2018

Weight lb 4894 Odp. No. 2017/A/58448
Base Length 12 - 12 ft.

QUALITA' - Grade
STANDARD ASTM A193/A193M 16 Grade B7
STANDARD ASME SA-A193/A193M Grade B7

COLATA - Heat 01637 ORI MARTIN S. P.A.

ANALISI CHIMICA DI COLATA - Cast analysis & by mass

C	Mn	Si	S	P	Cr	Ni	Mo	Al	Cu
0.430	0.780	0.200	0.0240	0.010	1.070	0.090	0.160	0.023	0.180

三

CARATTERISTICHE MECCANICHE ALLO STATO DI FORNITURA
Mechanical properties of the delivered material

Teacher: _____ Grade: _____ Month: _____

Tensile Strength	Rm PSI	141162,3	130000
Yield Strength	Rp(0,2) PSI	117021,4	110000
Elongation	A 4 (%)	26,3	16
Hardness	HBW	289,0	321
Reduction of area	Z (%)	55,7	50

Page 1 / Sequence

heat. D 1537

Segue certificato di controllo
 Inspection Certificate's continuance.

N. 080335 Date 31/05/2018

TEMPERABILITA' JOMINY - Jominy Hardenability

Distance mm	1,5	3	5	7	9	11	13	15
Hardness HRC	59,0	58,0	59,0	57,0	56,0	54,0	51,0	49,0
Distance mm	20	25	30	35	40	45	50	
Hardness HRC	44,0	41,0	38,0	36,0	36,0	35,0	34,0	

DIMENSIONE GRANO AUSTENITICO - Austenitic grain size

Value 6 ISO 643:03-ASTM E112

PERCENTUALE INCLUSIONALE - Inclusion Content

 According to DIN 50602 (Stahl Eisen Pruefblatt 1570 71)
 Method K: total value (oxides) K 3 = 4

NOTE - Notes

 According to: ASTM A434 17 grade BB and BC - ASTM A962-17
 ASTM A304-16

According to: ASTM A962-17 A Sec.5 ASTM A108-13

ASTM A29/A29M-16 ASTM A255- ASTM A304-16

Electrical Furnace Quenching : 1715°F 3 hours / oil

Tempering : 1130 °F 9 hours / still air

Free of mercury contamination - No Weld Repair

Macro etch examination according to ASTM E381: satisfactory.

Reduction ratio = 326,0 To 1,0 - Minimum 5:1

DI Value= 4,775"

100% crack tested : OK

This product was manufactured in Italy

Compliant to DFARS clause 252.225-7009 and -7012 .

Tempering temperature : 593 C Min

Macroetch examination according to ASTM E381: S 1; R 1; C 1

We certify hereby, that the above mentioned products are consistent with the order prescriptions.

 This certificate was generated by data system acc. to EN 10204,
 it is not necessary to be signed for validity.

Materiale conforme alle seguenti direttive/ra/regolamenti europei:

 - 73/230/CEE e successive modifiche
 - 73/234/CEE, 2002/22/CE, 2002/33/CE e 2002/112/CE
 - 73/237/CEE, 2002/23/CE, 2002/24/CE
 - 73/238/CEE, 2002/25/CE
 - 73/239/CEE, 2002/26/CE - Ep 06/2012, Allegato IV/IV
 - 73/240/CEE, 2002/27/CE - Ep 06/2012, Allegato IV/IV
 - 73/241/CEE, 2002/28/CE - Ep 06/2012, Allegato IV/IV
 - 73/242/CEE, 2002/29/CE - Ep 06/2012, Allegato IV/IV
 - 73/243/CEE, 2002/30/CE - Ep 06/2012, Allegato IV/IV
 - 73/244/CEE, 2002/31/CE - Ep 06/2012, Allegato IV/IV
 - 73/245/CEE, 2002/32/CE - Ep 06/2012, Allegato IV/IV
 - 73/246/CEE, 2002/33/CE - Ep 06/2012, Allegato IV/IV
 - 73/247/CEE, 2002/34/CE - Ep 06/2012, Allegato IV/IV
 - 73/248/CEE, 2002/35/CE - Ep 06/2012, Allegato IV/IV
 - 73/249/CEE, 2002/36/CE - Ep 06/2012, Allegato IV/IV
 - 73/250/CEE, 2002/37/CE - Ep 06/2012, Allegato IV/IV
 - 73/251/CEE, 2002/38/CE - Ep 06/2012, Allegato IV/IV
 - 73/252/CEE, 2002/39/CE - Ep 06/2012, Allegato IV/IV
 - 73/253/CEE, 2002/40/CE - Ep 06/2012, Allegato IV/IV
 - 73/254/CEE, 2002/41/CE - Ep 06/2012, Allegato IV/IV
 - 73/255/CEE, 2002/42/CE - Ep 06/2012, Allegato IV/IV
 - 73/256/CEE, 2002/43/CE - Ep 06/2012, Allegato IV/IV
 - 73/257/CEE, 2002/44/CE - Ep 06/2012, Allegato IV/IV
 - 73/258/CEE, 2002/45/CE - Ep 06/2012, Allegato IV/IV
 - 73/259/CEE, 2002/46/CE - Ep 06/2012, Allegato IV/IV
 - 73/260/CEE, 2002/47/CE - Ep 06/2012, Allegato IV/IV
 - 73/261/CEE, 2002/48/CE - Ep 06/2012, Allegato IV/IV
 - 73/262/CEE, 2002/49/CE - Ep 06/2012, Allegato IV/IV
 - 73/263/CEE, 2002/50/CE - Ep 06/2012, Allegato IV/IV
 - 73/264/CEE, 2002/51/CE - Ep 06/2012, Allegato IV/IV
 - 73/265/CEE, 2002/52/CE - Ep 06/2012, Allegato IV/IV
 - 73/266/CEE, 2002/53/CE - Ep 06/2012, Allegato IV/IV
 - 73/267/CEE, 2002/54/CE - Ep 06/2012, Allegato IV/IV
 - 73/268/CEE, 2002/55/CE - Ep 06/2012, Allegato IV/IV
 - 73/269/CEE, 2002/56/CE - Ep 06/2012, Allegato IV/IV
 - 73/270/CEE, 2002/57/CE - Ep 06/2012, Allegato IV/IV
 - 73/271/CEE, 2002/58/CE - Ep 06/2012, Allegato IV/IV
 - 73/272/CEE, 2002/59/CE - Ep 06/2012, Allegato IV/IV
 - 73/273/CEE, 2002/60/CE - Ep 06/2012, Allegato IV/IV
 - 73/274/CEE, 2002/61/CE - Ep 06/2012, Allegato IV/IV
 - 73/275/CEE, 2002/62/CE - Ep 06/2012, Allegato IV/IV
 - 73/276/CEE, 2002/63/CE - Ep 06/2012, Allegato IV/IV
 - 73/277/CEE, 2002/64/CE - Ep 06/2012, Allegato IV/IV
 - 73/278/CEE, 2002/65/CE - Ep 06/2012, Allegato IV/IV
 - 73/279/CEE, 2002/66/CE - Ep 06/2012, Allegato IV/IV
 - 73/280/CEE, 2002/67/CE - Ep 06/2012, Allegato IV/IV
 - 73/281/CEE, 2002/68/CE - Ep 06/2012, Allegato IV/IV
 - 73/282/CEE, 2002/69/CE - Ep 06/2012, Allegato IV/IV
 - 73/283/CEE, 2002/70/CE - Ep 06/2012, Allegato IV/IV
 - 73/284/CEE, 2002/71/CE - Ep 06/2012, Allegato IV/IV
 - 73/285/CEE, 2002/72/CE - Ep 06/2012, Allegato IV/IV
 - 73/286/CEE, 2002/73/CE - Ep 06/2012, Allegato IV/IV
 - 73/287/CEE, 2002/74/CE - Ep 06/2012, Allegato IV/IV
 - 73/288/CEE, 2002/75/CE - Ep 06/2012, Allegato IV/IV
 - 73/289/CEE, 2002/76/CE - Ep 06/2012, Allegato IV/IV
 - 73/290/CEE, 2002/77/CE - Ep 06/2012, Allegato IV/IV
 - 73/291/CEE, 2002/78/CE - Ep 06/2012, Allegato IV/IV
 - 73/292/CEE, 2002/79/CE - Ep 06/2012, Allegato IV/IV
 - 73/293/CEE, 2002/80/CE - Ep 06/2012, Allegato IV/IV
 - 73/294/CEE, 2002/81/CE - Ep 06/2012, Allegato IV/IV
 - 73/295/CEE, 2002/82/CE - Ep 06/2012, Allegato IV/IV
 - 73/296/CEE, 2002/83/CE - Ep 06/2012, Allegato IV/IV
 - 73/297/CEE, 2002/84/CE - Ep 06/2012, Allegato IV/IV
 - 73/298/CEE, 2002/85/CE - Ep 06/2012, Allegato IV/IV
 - 73/299/CEE, 2002/86/CE - Ep 06/2012, Allegato IV/IV
 - 73/300/CEE, 2002/87/CE - Ep 06/2012, Allegato IV/IV
 - 73/301/CEE, 2002/88/CE - Ep 06/2012, Allegato IV/IV
 - 73/302/CEE, 2002/89/CE - Ep 06/2012, Allegato IV/IV
 - 73/303/CEE, 2002/90/CE - Ep 06/2012, Allegato IV/IV
 - 73/304/CEE, 2002/91/CE - Ep 06/2012, Allegato IV/IV
 - 73/305/CEE, 2002/92/CE - Ep 06/2012, Allegato IV/IV
 - 73/306/CEE, 2002/93/CE - Ep 06/2012, Allegato IV/IV
 - 73/307/CEE, 2002/94/CE - Ep 06/2012, Allegato IV/IV
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 - 73/309/CEE, 2002/96/CE - Ep 06/2012, Allegato IV/IV
 - 73/310/CEE, 2002/97/CE - Ep 06/2012, Allegato IV/IV
 - 73/311/CEE, 2002/98/CE - Ep 06/2012, Allegato IV/IV
 - 73/312/CEE, 2002/99/CE - Ep 06/2012, Allegato IV/IV
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 - 73/315/CEE, 2002/102/CE - Ep 06/2012, Allegato IV/IV
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 - 73/320/CEE, 2002/107/CE - Ep 06/2012, Allegato IV/IV
 - 73/321/CEE, 2002/108/CE - Ep 06/2012, Allegato IV/IV
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 - 73/334/CEE, 2002/121/CE - Ep 06/2012, Allegato IV/IV
 - 73/335/CEE, 2002/122/CE - Ep 06/2012, Allegato IV/IV
 - 73/336/CEE, 2002/123/CE - Ep 06/2012, Allegato IV/IV
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 - 73/338/CEE, 2002/125/CE - Ep 06/2012, Allegato IV/IV
 - 73/339/CEE, 2002/126/CE - Ep 06/2012, Allegato IV/IV
 - 73/340/CEE, 2002/127/CE - Ep 06/2012, Allegato IV/IV
 - 73/341/CEE, 2002/128/CE - Ep 06/2012, Allegato IV/IV
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 - 73/362/CEE, 2002/149/CE - Ep 06/2012, Allegato IV/IV
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 - 73/364/CEE, 2002/151/CE - Ep 06/2012, Allegato IV/IV
 - 73/365/CEE, 2002/152/CE - Ep 06/2012, Allegato IV/IV
 - 73/366/CEE, 2002/153/CE - Ep 06/2012, Allegato IV/IV
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 - 73/371/CEE, 2002/158/CE - Ep 06/2012, Allegato IV/IV
 - 73/372/CEE, 2002/159/CE - Ep 06/2012, Allegato IV/IV
 - 73/373/CEE, 2002/160/CE - Ep 06/2012, Allegato IV/IV
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 - 73/375/CEE, 2002/162/CE - Ep 06/2012, Allegato IV/IV
 - 73/376/CEE, 2002/163/CE - Ep 06/2012, Allegato IV/IV
 - 73/377/CEE, 2002/164/CE - Ep 06/2012, Allegato IV/IV
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 - 73/380/CEE, 2002/167/CE - Ep 06/2012, Allegato IV/IV
 - 73/381/CEE, 2002/168/CE - Ep 06/2012, Allegato IV/IV
 - 73/382/CEE, 2002/169/CE - Ep 06/2012, Allegato IV/IV
 - 73/383/CEE, 2002/170/CE - Ep 06/2012, Allegato IV/IV
 - 73/384/CEE, 2002/171/CE - Ep 06/2012, Allegato IV/IV
 - 73/385/CEE, 2002/172/CE - Ep 06/2012, Allegato IV/IV
 - 73/386/CEE, 2002/173/CE - Ep 06/2012, Allegato IV/IV
 - 73/387/CEE, 2002/174/CE - Ep 06/2012, Allegato IV/IV
 - 73/388/CEE, 2002/175/CE - Ep 06/2012, Allegato IV/IV
 - 73/389/CEE, 2002/176/CE - Ep 06/2012, Allegato IV/IV
 - 73/390/CEE, 2002/177/CE - Ep 06/2012, Allegato IV/IV
 - 73/391/CEE, 2002/178/CE - Ep 06/2012, Allegato IV/IV
 - 73/392/CEE, 2002/179/CE - Ep 06/2012, Allegato IV/IV
 - 73/393/CEE, 2002/180/CE - Ep 06/2012, Allegato IV/IV
 - 73/394/CEE, 2002/181/CE - Ep 06/2012, Allegato IV/IV
 - 73/395/CEE, 2002/182/CE - Ep 06/2012, Allegato IV/IV
 - 73/396/CEE, 2002/183/CE - Ep 06/2012, Allegato IV/IV
 - 73/397/CEE, 2002/184/CE - Ep 06/2012, Allegato IV/IV
 - 73/398/CEE, 2002/185/CE - Ep 06/2012, Allegato IV/IV
 - 73/399/CEE, 2002/186/CE - Ep 06/2012, Allegato IV/IV
 - 73/400/CEE, 2002/187/CE - Ep 06/2012, Allegato IV/IV
 - 73/401/CEE, 2002/188/CE - Ep 06/2012, Allegato IV/IV
 - 73/402/CEE, 2002/189/CE - Ep 06/2012, Allegato IV/IV
 - 73/403/CEE, 2002/190/CE - Ep 06/2012, Allegato IV/IV
 - 73/404/CEE, 2002/191/CE - Ep 06/2012, Allegato IV/IV
 - 73/405/CEE, 2002/192/CE - Ep 06/2012, Allegato IV/IV
 - 73/406/CEE, 2002/193/CE - Ep 06/2012, Allegato IV/IV
 - 73/407/CEE, 2002/194/CE - Ep 06/2012, Allegato IV/IV
 - 73/408/CEE, 2002/195/CE - Ep 06/2012, Allegato IV/IV
 - 73/409/CEE, 2002/196/CE - Ep 06/2012, Allegato IV/IV
 - 73/410/CEE, 2002/197/CE - Ep 06/2012, Allegato IV/IV
 - 73/411/CEE, 2002/198/CE - Ep 06/2012, Allegato IV/IV
 - 73/412/CEE, 2002/199/CE - Ep 06/2012, Allegato IV/IV
 - 73/413/CEE, 2002/200/CE - Ep 06/2012, Allegato IV/IV
 - 73/414/CEE, 2002/201/CE - Ep 06/2012, Allegato IV/IV
 - 73/415/CEE, 2002/202/CE - Ep 06/2012, Allegato IV/IV
 - 73/416/CEE, 2002/203/CE - Ep 06/2012, Allegato IV/IV
 - 73/417/CEE, 2002/204/CE - Ep 06/2012, Allegato IV/IV
 - 73/418/CEE, 2002/205/CE - Ep 06/2012, Allegato IV/IV
 - 73/419/CEE, 2002/206/CE - Ep 06/2012, Allegato IV/IV
 - 73/420/CEE, 2002/207/CE - Ep 06/2012, Allegato IV/IV
 - 73/421/CEE, 2002/208/CE - Ep 06/2012, Allegato IV/IV
 - 73/422/CEE, 2002/209/CE - Ep 06/2012, Allegato IV/IV
 - 73/423/CEE, 2002/210/CE - Ep 06/2012, Allegato IV/IV
 - 73/424/CEE, 2002/211/CE - Ep 06/2012, Allegato IV/IV
 - 73/425/CEE, 2002/212/CE - Ep 06/2012, Allegato IV/IV
 - 73/426/CEE, 2002/213/CE - Ep 06/2012, Allegato IV/IV
 - 73/427/CEE, 2002/214/CE - Ep 06/2012, Allegato IV/IV
 - 73/428/CEE, 2002/215/CE - Ep 06/2012, Allegato IV/IV
 - 73/429/CEE, 2002/216/CE - Ep 06/2012, Allegato IV/IV
 - 73/430/CEE, 2002/217/CE - Ep 06/2012, Allegato IV/IV
 - 73/431/CEE, 2002/218/CE - Ep 06/2012, Allegato IV/IV
 - 73/432/CEE, 2002/219/CE - Ep 06/2012, Allegato IV/IV
 - 73/433/CEE, 2002/220/CE - Ep 06/2012, Allegato IV/IV
 - 73/434/CEE, 2002/221/CE - Ep 06/2012, Allegato IV/IV
 - 73/435/CEE, 2002/222/CE - Ep 06/2012, Allegato IV/IV
 - 73/436/CEE, 2002/223/CE - Ep 06/2012, Allegato IV/IV
 - 73/437/CEE, 2002/224/CE - Ep 06/2012, Allegato IV/IV
 - 73/438/CEE, 2002/225/CE - Ep 06/2012, Allegato IV/IV
 - 73/439/CEE, 2002/226/CE - Ep 06/2012, Allegato IV/IV
 - 73/440/CEE, 2002/227/CE - Ep 06/2012, Allegato IV/IV
 - 73/441/CEE, 2002/228/CE - Ep 06/2012, Allegato IV/IV
 - 73/442/CEE, 2002/229/CE - Ep 06/2012, Allegato IV/IV
 - 73/443/CEE, 2002/230/CE - Ep 06/2012, Allegato IV/IV
 - 73/444/CEE, 2002/231/CE - Ep 06/2012, Allegato IV/IV
 - 73/445/CEE, 2002/232/CE - Ep 06/2012, Allegato IV/IV
 - 73/446/CEE, 2002/233/CE - Ep 06/2012, Allegato IV/IV
 - 73/447/CEE, 2002/234/CE - Ep 06/2012, Allegato IV/IV
 - 73/448/CEE, 2002/235/CE - Ep 06/2012, Allegato IV/IV
 - 73/449/CEE, 2002/236/CE - Ep 06/2012, Allegato IV/IV
 - 73/450/CEE, 2002/237/CE - Ep 06/2012, Allegato IV/IV
 - 73/451/CEE, 2002/238/CE - Ep 06/2012, Allegato IV/IV
 - 73/452/CEE, 2002/239/CE - Ep 06/2012, Allegato IV/IV
 - 73/453/CEE, 2002/240/CE - Ep 06/2012, Allegato IV/IV
 - 73/454/CEE, 2002/241/CE - Ep 06/2012, Allegato IV/IV
 - 73/455/CEE, 2002/242/CE - Ep 06/2012, Allegato IV/IV
 - 73/456/CEE, 2002/243/CE - Ep 06/2012, Allegato IV/IV
 - 73/457/CEE, 2002/244/CE - Ep 06/2012, Allegato IV/IV
 - 73/458/CEE, 2002/245/CE - Ep 06/2012, Allegato IV/IV
 - 73/459/CEE, 2002/246/CE - Ep 06/2012, Allegato IV/IV
 - 73/460/CEE, 2002/247

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL : AISI 4140 ROUND BAR
MINIMUM ROCKWELL C = 28 RC
MAXIMUM ROCKWELL C = 32 RC

SPECIFICATION: ASTM A29, AMS 6349, AMS 6382, AMS 6529, MIL-S-5626, ASTM A434-BC/BD, ASTM A193-B7

PART NUMBER:

MT-4140-R-[D.DDD]
WHERE "D.DDD" = DIAMETER IN INCHES
EX. 4" ROUND BAR = MT-4140-R-4.000

NOTE:

ALSO COMMONLY KNOWN AS AISI 4140 HT/QT

REV.	DESCRIPTION	ECN #	BY
B	MINIMAX RC UPDATED, ADDED NOTE FOR HT/QT, ADDED ASTM A34-BC/BD, ASTM A193- B7 AND MIL-S-5626 NEW ISSUE	18-524 VM	KK
A		17-790	VM

3

REV.	DESCRIPTION	ECN #	BY
1	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		A
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MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MT-4140 QT-RD.325
 DATE: 18/11/27

PO / BATCH NO.: P0041674/5131151

MATERIAL CERT REC'D: Yes
 QUANTITY RECEIVED: 124
 QUANTITY INSPECTED: 124
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 0.375"
 THICKNESS RECEIVED: 0.375"
 SHEET SIZE ORDERED: —
 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	N	
CORRECT FINISH	Y	N	
CORROSION	Y	N	
CORRECT GRAIN DIRECTION	Y	N	
CORRECT MATERIAL PER M-DRAWING	Y	N	<u>ASTM A193-B7</u>
CORRECT THICKNESS	Y	N	
PHOTO REQUIRED	Y	N	
CORRECT REF # TO LINK CERT	Y	N	<u>HT.D1537</u>
CORRECT MATERIAL IDENTIFICATION	Y	N	
CORRECT M# ON THE MATERIAL	Y	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	N	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING	HRC	HRB	DUR A	DUR D	WEBSTER

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)	
INSPECTED BY: <u>DAS</u> <u>61</u> <u>9-89</u>	SIGNED OFF BY: _____	DATE: _____
DATE: <u>18/11/27</u>		

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

-1C 1A25

Rst-4.

5920

Eaton Steel Bar Company Inspection Certificate 1606341

EN 10204:2004-3:1

Customer

BOL

Ship Date

Customer PO

Item

Customer Item

Item Description

22-Nov-2016 B97156 1009791 rev 002

4 CD RD11144 RD3 12H SBQ SRA S2 CGP RT

All bundles listed below were produced using steel from Heat A140466 issued by STEEL DYNAMICS INC and were completed from Eaton Steel Job 763009.

Chemistry	Description	Value	Units
C	Carbon	0.40000	PHGT
Mn	Manganese	1.42000	PHGT
P	Phosphorus	0.01100	PHGT
S	Sulfur	0.29000	PHGT
Si	Silicon	0.25000	PHGT
Ni	Nickel	0.06000	PHGT
Cr	Chromium	0.15000	PHGT
Mo	Molybdenum	0.03000	PHGT
Al	Aluminum	0.00100	PHGT
Ca	Copper	0.15000	PHGT
V	Vanadium	0.00500	PHGT
Co	Columbium	0.00200	PHGT
N	Nitrogen	0.01000	PHGT
DI	Ideal Diameter	2.45000	IN
Geometry	Description	Value	Units
DIAMETER	Diameter	3.5950 - 4.0000	IN
BUNDLE VARIATION	Mean Within Bundle Variation	0 - 2	IN
LENGTH	Length	140.0000 - 148.0000	IN
CF STRAIGHT	Cold Finished Deflection in loft.	0.0000 - 0.1250	IN
Mechanical	Description	Value	Units
TENSILE PSI	Tensile Strength in PSI Units	118400	PSI
YIELD PSI	Yield Strength in PSI Units	108000	PSI
ELONGATION	Percent Elongation	11.00	PCT
REDUCTION	Percent Reduction in Area	22.0	PCT
BRINELL SURF	Brinell Surface	245.0	BBN
COLD WORKING	Description	Value	Units
SEAM DEPTH	Allowable Seam Depth	0.0000 - 0.0960	IN
ASTM Standard	Description	Value	Units
A106-13	Steel Bar, CF Carbon & Alloy	CONFORMS	
A311 Class B	Heavy Draft CD SRA	CONFORMS	
Tag Number	Qty	Length	
260-142688	3763	127.6 in	

Bundle tags with Eaton Steel identifiers reference the steel grade, heat, purchase order number, part number, product description and weight. Tested and certified in accordance with Eaton Steel's Quality Manual QM-00001 / Rev 3 / 2/26/13.

We hereby certify the above to be in conformance, and a true copy of data represented in company records. This steel was not subject to weld repair or exposed to mercury while in the possession of Eaton Steel.

Created on 22-Nov-2016 | This document was prepared by means of electronic data processing and is a valid written signature.

Thomas Shabes, Corporate Metals/rgs1

10221 Capital Avenue, Oak Park, MI 48237 USA

Tel: 248-398-3434

Fax: 248-398-1434

Root A140456

03 Mechanical Testing Results - ASTM E 8-11	
Certificate Number: 2081.01	
Testing Laboratory	
 ACCREDITED	
Comments:	14-TML-1582-01
Sample ID:	14-TML-1582-01
WO 763008 Part 1009791 Size 4.00 CD RD Grade 1144 Heat A140456	1144 Heat A140456
The following results are to ASTM E 8-11.	
0.2% Offset Yield Test Report	
0.2% Offset Yield psi	108000
Ultimate Tensile psi	118400
Elongation Manual %	11
Reduction Area %	22
Hardness Brinell	
Than Nettlburg's uncertainty values for this test are maintained on file and are available upon request Approved by: Tom Shabos Approved Date: 08/05/2014	
Entered by: Steve Avery Entered Date: 08/05/2014	

Report # 14-TML-1582

Section 2 of 2 sections

09 Hardness Results - ASTM E 10-01															
Certificate Number: 2087.01 (3,000 lb.)															
Testing Laboratory															
ACCREDITED															
Comments:	Sample ID: 14-TML-1682-01														
WO 763009 Part 1008791 Size 4.00 CD RD Grade 1144 Heat A140456															
The following results are in the HBW scale.															
1	245														
2	.														
<table border="1"><tr><td>Mean</td><td>246</td></tr><tr><td>Std Dev</td><td>-</td></tr><tr><td>Lowest</td><td>-</td></tr><tr><td>Highest</td><td>-</td></tr><tr><td>Range</td><td>-</td></tr><tr><td>Total Tests</td><td>1</td></tr><tr><td>Rejected</td><td>0</td></tr></table>		Mean	246	Std Dev	-	Lowest	-	Highest	-	Range	-	Total Tests	1	Rejected	0
Mean	246														
Std Dev	-														
Lowest	-														
Highest	-														
Range	-														
Total Tests	1														
Rejected	0														
Titan Metallurgy's uncertainty values for this test are maintained on file and are available upon request.															
Approved By: Tom Snabes															
Entered by: Steve Avery															
Entered Date: 06/05/2014															
Approved Date: 06/05/2014															

Report # 14-TML-1682

End of Report

Lab Services Report

10221 CAPITAL AVENUE
OAK PARK MI 48237
(248) 543-3578 telephone
(248) 398-1434 facsimile

Bill To:
00000
Eaton Steel Corporation
10221 Capital Avenue
Oak Park MI 48237
Alt:
Andrew Vuoris
248-381-3434
severny@titanmetallurgy.com

Ship To:
Eaton Steel Corporation
10221 Capital Avenue
Oak Park MI 48237
Report Date:
06/06/2014

This report contains results for the indicated services performed on the following sample(s):

Customer Sample #	Report	Service #
Titan Sample #	Section	
WO 763009 Part 1009791	Size 4.00 CD RD Grade 1144 Heat A140456	
14-TML-1582-01 1	03 - Mechanical Testing - ASTM E 8-01 (1 Tensile)	
WO 763009 Part 1009791	Size 4.00 CD RD Grade 1144 Heat A140456	
14-TML-1582-01 2	08 - Hardness - ASTM E 10-01 (Brinell)	

Any services within a section marked with * are not part of Titan Metallurgy's current A2LA accreditation.



Thomas J. Snabes, Metallurgist

All testing performed by Titan Metallurgy was done at ambient (room) temperature.

The results in this laboratory report relate only to the items tested.

For questions or comments contact us at 248-543-3578 or Qanda@titanmetallurgy.com.

Report # 14-TML-1582

Cover Page

Report # 14-TML-1582

Section 1 of 2 sections

1	2	3	4	5	6	7	8
REV A	DESCRIPTION NEW				DATE 17/08/09	BY V.M.	APPROVED V.M.

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL : AISI 1144 STRESSPROOF STEEL ROUND BAR
 SPECIFICATION: ASTM A311 or UNS G11440
 PART NUMBER: MT-1144-R (D,DDD)
 WHERE "D,DDD" = DIAMETER IN INCHES
 EG. 5/8" ROUND BAR = MT-1144-R0.625

DART AEROSPACE	
MT-1144 STRESSPROOF STEEL	
ROUND BAR	
DRAWING NO.	REV
MT-1144-R	A
DESIGNER KEY:	VA1.6/3/2017
DRAWN BY:	VA1.6/3/2017
CHECKED BY:	VA1.6/3/2017
NEC. APPROV.:	VA1.6/3/2017
QA APPROV.:	VA1.6/3/2017
COMPTND:	VA1.6/3/2017
DATE:	05/02/2017
SCALE:	NOTES: 1:150
INCHES & MM	
XX	XX
XX	XX
XX	XX
DIMENSIONS ARE IN INCHES	
UNLESS OTHERWISE SPECIFIED	
AUTOMATIC DRAWING	
NO TOC PER	
3 DIMENSIONAL LIMITS APPLY	
3 DIA TOLERANCES	
COPRIGHT © 2013 BY DART AEROSPACE LTD	
ALL INFORMATION CONTAINED HEREIN IS UNPUBLISHED PROPRIETARY INFORMATION.	
IT MAY NOT BE REPRODUCED, IN WHOLE OR IN PART, OR	
DISCLOSED TO OTHERS, IN WHOLE OR IN PART, WITHOUT THE EXPRESS WRITTEN PERMISSION OF DART AEROSPACE LTD.	

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MT-1144-R4.00
 DATE: 18/11/23

PO / BATCH NO.: P0041674/5131152

MATERIAL CERT REC'D: Yes
 QUANTITY RECEIVED: 10ft
 QUANTITY INSPECTED: 10ft
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 4.00"
 THICKNESS RECEIVED: 4.00"
 SHEET SIZE ORDERED: —
 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)		COMMENTS
	Y	N	
SURFACE DAMAGE	<u>Y</u>	<u>N</u>	
CORRECT FINISH	<u>Y</u>	<u>N</u>	
CORROSION	<u>Y</u>	<u>N</u>	
CORRECT GRAIN DIRECTION	<u>Y</u>	<u>N</u>	
CORRECT MATERIAL PER M-DRAWING	<u>Y</u>	<u>N</u>	
CORRECT THICKNESS	<u>Y</u>	<u>N</u>	
PHOTO REQUIRED	<u>Y</u>	<u>N</u>	
CORRECT REF # TO LINK CERT	<u>Y</u>	<u>N</u>	
CORRECT MATERIAL IDENTIFICATION	<u>Y</u>	<u>N</u>	
CORRECT M# ON THE MATERIAL	<u>Y</u>	<u>N</u>	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	<u>Y</u>	<u>N</u>	
DOES THIS REQUIRE AN EXTRUSION REPORT	<u>Y</u>	<u>N</u>	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING	HRC	HRB	DUR A	DUR D	WEBSTER

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>AT</u> <u>61</u> <u>9.80</u>	SIGNED OFF BY: _____
DATE: <u>18/11/23</u>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in



ACIER OUELLETTE INC.

Salaberry de la Mare (Q : béc) J6S 5L1
Tél.: 4 - 377-4248; Mtl: 514-336-4223 Ext.: 800-667-4248
Fax: 450-377-5696 Mtl: 514-336-4246 Ext.: 866-456-4242

DELIVERY - CLIENT

CO00120218

120

Billed to	Shipped to	Customer Nº
DART AEROSPACE LTD	1270 , ABERDEEN ST. HAWKESBURY, Ontario, K6A 1K7	CL10001056 2018/11/12
Instruction	Delivery Route	Credit Terme
1270 , ABERDEEN ST. HAWKESBURY, Ontario, K6A 1K7	Att : LUSSIER Tel.: (613) 632-5200 X 730	5

Note: ATTENTION: MII TEST BEQUIS

114

Conditions : All sold and delivered materials remain the property of "Acier Ouellette Inc" until payment is made in full, complete and cashed. All lost, materials are at the buyer's expense. The warranty offered by "Acier Ouellette Inc." is the same as offered and honored by the manufacturer and his warranty is transferred by "Acier Ouellette Inc.". To the client, The buyer hereby accepts to respect the following conditions: Net 30 days from billing date and the buyer accepts to pay administration charges of 2% per month (24% per annum) on all past due amounts over 30 days. Any default in respect with this contract will lead to payment by acceleration and permits to the seller, at his choice to claim for the balance due or the repossession of the goods sold. All claims must be made within five (5) days with this document enclosed. Any merchandise that has been damaged, cut or modified cannot be returned. All goods returned must be with our authorization and are subject to

NIK : K-105310-0

Total weight (Lbs) : 207.00

Prepared By :	Verified By :	Delivered By :	Time	Y	M	D	Date
							Customer's Signature

100010
CERTIFICATE OF TEST
CERTIFICAT D'ESAI

21560 N

Page 01 of 02

Certification Date
22-NOV-2018

Dart
CUSTOMER ORDER NUMBER
NUMÉRO DE COMMANDE DU CLIENT

AC00021560

PART NUMBER/NUMÉRO DE PIÈCE

547381

Invoice Number
T386186

SOLD TO: ACIER OUELLETTE INC. **SHIP TO:** ACIER OUELLETTE INC.
VENDU À: DIVISION SALABERRY DE VALLEYFIELD
935, BOUL. DU HAVRE
SALABERRY-DE- VALLEYFIELD QC J6S 5L1 **EXPIRED** DIVISION SALABERRY DE VALLEYFIELD
935, BOUL. DU HAVRE
SALABERRY-DE- VALLEYFIELD QC J6S 5L1

Description: STRESSPROOF CF BAR ASTM A108

5 RD S/C 4 1/2" (48.0")

HEAT: A180131

Line Total: 267.28 LB

ITEM: 547381

Specifications:

ASTM A108 13

ASTM A29 16

ASTM A311 04

CHEMICAL ANALYSIS

C	MN	P	S	SI	NI	CR	MO
0.45	1.41	0.011	0.294	0.24	0.10	0.13	0.03
CU	AL	V	N	PB	B		
0.31	0.001	0.004	0.006	0.003	0.0017		

RCPT: R503328

COUNTRY OF ORIGIN : USA

MECHANICAL PROPERTIES

DESCRIPTION	YLD STR PSI	ULT TEN PSI	%ELONG IN 02 IN	%RED IN AREA	HARDNESS BHN
	111613.0	126782.0	10.1	25.7	255

IDEAL DIAMETER : 2.58 IN

The above data were transcribed from the manufacturer's Certificate of Test after verification for completeness and specification requirements of the information on the certificate. All test results remain on file subject to examination. /Les informations ci-haut-mentionnées sont transcris du certificat d'essais du manufacturier après vérification de l'état complet des spécifications inscrites sur le certificat. We hereby certify that the material covered by this report will meet the applicable requirements described herein, including any specification forming a part of the description. /Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites ci-haut.

The willful recording of false, fictitious, or fraudulent statements in connection with test results may be punishable as a felony under federal statutes. /Les informations fausses, fictives ou frauduleuses en rapport avec le résultat des essais sont punissables en vertu des lois fédérales.

Material did not come in contact with mercury while in our possession./Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites ci-haut.

JOANNE DESPRES

Joanne Despres
MANAGER QUALITY ASSURANCE
GÉRANT DE L'ASSURANCE QUALITÉ

CERTIFICATE OF TEST CERTIFICAT D'ESAIS

Page 02 of 02

Certification Date
22-NOV-2018

CUSTOMER ORDER NUMBER
NUMÉRO DE COMMANDE DU CLIENT
AC00021560

Invoice Number
T386186

PART NUMBER/NUMÉRO DE PIÈCE
547381

SOLD TO:	ACIER OUELLETTE INC.	SHIP TO:	ACIER OUELLETTE INC.
VENDU À:	DIVISION SALABERRY DE VALLEYFIELD	EXPÉDIÉ À:	DIVISION SALABERRY DE VALLEYFIELD
	935, BOUL. DU HAVRE SALABERRY-DE- VALLEYFIELD		935, BOUL. DU HAVRE SALABERRY-DE- VALLEYFIELD
	QC J6S 5L1		QC J6S

Description: STRESSPROOF® CF BAR ASTM A108
5 RD S/C 4'0" (48.0")

Line Total: 267.28 LB

HEAT: A180131 ITEM: 547381

STRAND CAST REDUCTION RATIO 6.7 TO 1
MATERIAL IS FREE FROM MERCURY CONTAMINATION
NO WELD REPAIR PERFORMED ON MATERIAL

COMMENTS

ACCEPTED FOR 1E0368 PN 141-5849 MP PER JMD 10-22-18

The above data were transcribed from the manufacturer's Certificate of Test after verification for completeness and specification requirements of the information on the certificate. All test results remain on file subject to examination. /Les informations ci-haut-mentionnées sont transcris du certificat d'essais du manufacturier après vérification de l'état complet des spécifications inscrites sur le certificat. We hereby certify that the material covered by this report will meet the applicable requirements described herein, including any specification forming a part of the description. /Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites ci-haut.

The willful recording of false, fictitious, or fraudulent statements in connection with test results may be punishable as a felony under federal statutes. /Les informations fausses, fictives ou frauduleuses en rapport avec le résultat des essais sont punissables en vertu des lois fédérales.

Material did not come in contact with mercury while in our possession./Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites ci-haut.



MANAGER QUALITY ASSURANCE
GÉRANT DE L'ASSURANCE QUALITÉ

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL : AISI 1144 STRESSPROOF STEEL ROUND BAR
 SPECIFICATION: ASTM A311 or UNS G11440
 PART NUMBER: MT-1144-R(D,DDD)
 WHERE "D,DDD" = DIAMETER IN INCHES
 EG. 5/8" ROUND BAR = MT-1144-R0.625

REV	DESCRIPTION	DATE	BY	APPROVED
A	NEW ISSUE	17.08.09	VM	WM

12

DART																							
AEROSPACE																							
Mechanized Ordnance Cradle																							
TYPE AISI 1144 STRESSPROOF STEEL																							
ROUND BAR																							
DRAFT NO	REV																						
MT-1144-R	A																						
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">DESCRIPTION</td> <td style="width: 90%;">2000' 6" 606.000" FRACTIONAL, 1/8" ANODIZED, 1/8" SURFACE 3.15"</td> </tr> <tr> <td>DRAWN BY</td> <td>3X 1/8" 01</td> </tr> <tr> <td>CHECKED</td> <td>YAM/03/21/2017</td> </tr> <tr> <td>SAC</td> <td>YAM/03/21/2017</td> </tr> <tr> <td>NO G. APPRO.</td> <td>1 DIMENSIONAL INTRUSION, 1/4"</td> </tr> <tr> <td>DA APPRO.</td> <td>2 INTRUSION 1.100 AND 1.025 PER</td> </tr> <tr> <td>APPROVED</td> <td>3 ONE DIMENSIONAL LIMITS APPLY</td> </tr> <tr> <td>DATE</td> <td>YAM/08/05/2017</td> </tr> <tr> <td>SCALE</td> <td>1:1</td> </tr> <tr> <td>N/I'S</td> <td>WEIGHT 0.01335</td> </tr> <tr> <td colspan="2" style="text-align: center;">Sheets 1 of 1</td> </tr> </table>		DESCRIPTION	2000' 6" 606.000" FRACTIONAL, 1/8" ANODIZED, 1/8" SURFACE 3.15"	DRAWN BY	3X 1/8" 01	CHECKED	YAM/03/21/2017	SAC	YAM/03/21/2017	NO G. APPRO.	1 DIMENSIONAL INTRUSION, 1/4"	DA APPRO.	2 INTRUSION 1.100 AND 1.025 PER	APPROVED	3 ONE DIMENSIONAL LIMITS APPLY	DATE	YAM/08/05/2017	SCALE	1:1	N/I'S	WEIGHT 0.01335	Sheets 1 of 1	
DESCRIPTION	2000' 6" 606.000" FRACTIONAL, 1/8" ANODIZED, 1/8" SURFACE 3.15"																						
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APPROVED	3 ONE DIMENSIONAL LIMITS APPLY																						
DATE	YAM/08/05/2017																						
SCALE	1:1																						
N/I'S	WEIGHT 0.01335																						
Sheets 1 of 1																							

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MJ-1144-R5.000
 DATE: 18/11/26

PO / BATCH NO.: P00416741

MATERIAL CERT REC'D: Yes
 QUANTITY RECEIVED: 44t
 QUANTITY INSPECTED: 44t
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 5.000"
 THICKNESS RECEIVED: 5.000"
 SHEET SIZE ORDERED: —
 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	<input checked="" type="radio"/> Y <input type="radio"/> N	
CORRECT FINISH	<input checked="" type="radio"/> Y <input type="radio"/> N	
CORROSION	<input checked="" type="radio"/> Y <input type="radio"/> N	
CORRECT GRAIN DIRECTION	<input checked="" type="radio"/> Y <input type="radio"/> N	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="radio"/> Y <input type="radio"/> N	<i>ASTM A311</i>
CORRECT THICKNESS	<input checked="" type="radio"/> Y <input type="radio"/> N	
PHOTO REQUIRED	<input checked="" type="radio"/> Y <input type="radio"/> N	
CORRECT REF # TO LINK CERT	<input checked="" type="radio"/> Y <input type="radio"/> N	<i>HT: A180131</i>
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="radio"/> Y <input type="radio"/> N	
CORRECT M# ON THE MATERIAL	<input checked="" type="radio"/> Y <input type="radio"/> N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	<input checked="" type="radio"/> Y <input type="radio"/> N	
DOES THIS REQUIRE AN EXTRUSION REPORT	<input checked="" type="radio"/> Y <input type="radio"/> N	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING	HRC	HRB	DUR A	DUR D	WEBSTER

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>61</u> <u>9-89</u>	SIGNED OFF BY: _____
DATE: <u>18/11/26</u>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

Chemical certification
Certification chimique

21547N

Order Num / No. Commande AC-21547	Vendor / Fournisseur 46	Country of origin / Pay d'origine SLOVENIA	Date 08/31/17	Heat / coulée 300536	Material ID # / No. matière
Grade / Nuance 4140 PLT	Conditions HEAT TREATED Q&T				
Shape / Forme FLAT	Size / Dimension 2.000	Specifications ASTM A829/A829M			

Chemical composition / Analyse chimique					
Carbon (C)	Silicon (Si)	Manganese (Mn)	Phosphorus (P)		
Mini / maxi 0.3700 / 0.4400	0.1500 / 0.3500	0.6500 / 1.1000	0.0100 / 0.0190		
Actuel % 0.410	0.226	0.743	0.007		
Sulphur (S)	Chromium (Cr)	Nickel (Ni)	Molybdenum (Mo)		
Mini / maxi 0.0200 / 0.0400	0.7500 / 1.2000	0.1000 / 0.2000	0.1500 / 0.2500		
Actuel % 0.001	0.950	0.530	0.180		
Cooper (Cu)	Vanadium (V)	Aluminum (Al)	Tungsten (W)		
Mini / maxi 0.1900 / 0.2900	0.0400 / 0.0500	0.0000 / 0.0000	0.0000 / 0.0000		
Actuel % 0.183	0.032	0.032	0.000		
Cobalt (Co)	Titanium (Ti)				
Mini / maxi 0.0000 / 0.0000	0.0000 / 0.0000	0.0000 / 0.0000	0.0000 / 0.0000	0.0000 / 0.0000	
Actuel % 0.000	0.000	0.000	0.000	0.000	
Mechanical properties / Propriétés Mécaniques					
Yield strenght / Élasticité	Tensile / Rés. à la traction	Elongation / Allon. (%)	Red. of area / Surface (%)	RC	Surface Hd / Dureté
0.000 PSI	0.000 PSI	0.00	0.00		305 BHN

Note:

We certify that the above data has been verified and are conform to an original mill or supplier certificate supplied to us with the material

Nous certifions que les données ci haut ont été vérifier et sont conformes d'après un certificat originale qui nous a été fourni par notre fournisseur.

MJ

Prepared by: / Préparé par:

Heat 300536

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL : AISI 4140 / 4142 STEEL SHEET OR PLATE
 MINIMUM ROCKWELL C = 28 Rc
 MAXIMUM ROCKWELL C = 32 Rc

SPECIFICATION:

ASTM A829, AMS 6395

PART NUMBER:

MT-4140-S-[T,TTT] x [W,WWW]
 WHERE "T,TTT" = THICKNESS IN INCHES
 WHERE "W,WWW" = WIDTH IN INCHES (OPTIONAL FOR SPECIFYING CUT PLATE)

EX. 0.063" THICK SHEET = MT-4140-S-0.063
 EX. 3.5" WIDE BY 0.500" THICK PLATE = MT-4140-S-0.500X3.500

REV	DESCRIPTION	ECN #	DATE	BY	APPROVED
A	NEW ISSUE	18-544	18.2.13	VM	ML

DART AEROSPACE		Mechanically Created with
AISI4140 / 4142 STEEL SHEET OR PLATE		
PAGE NO	REV	A
TOE NO		
UNLESS OTHERWISE SPECIFIED: BUT NOT LESS THAN 14.328 NOT GREATER THAN 14.328 TOLERANCES: ± 1/8		
INITIALS AND DATE		
DESIGNED BY:	VA 2/25/2018	TOLERANCES
DRAWN BY:	VA 02/13/2018	FRCTIONS: ± 1/8
CHECKED BY:	VA 02/13/2018	± 1/16
INSPECTED BY:	DO 02/13/2018	± 1/32
APPROVED BY:	ML 02/14/2018	± 1/64
SCALE: MTS		
COPYRIGHT © 2018 BY DART AEROSPACE LTD		
ALL INFORMATION CONTAINED HEREIN IS UNPUBLISHED PROPRIETARY INFORMATION OF DART AEROSPACE LTD. IT MAY NOT BE REPRODUCED, TRANSMITTED, DISCLOSED OR USED, IN WHOLE OR IN PART, WITHOUT THE PRIOR WRITTEN CONSENT OF DART AEROSPACE LTD.		

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MT-4140-S-2.00x4.00

PO / BATCH NO.: P0041674/S131153

DATE: 18/11/23

MATERIAL CERT REC'D: Kes
 QUANTITY RECEIVED: 8ft
 QUANTITY INSPECTED: 8ft
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 2.00"
 THICKNESS RECEIVED: 2.00"
 SHEET SIZE ORDERED: —
 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <u>(N)</u>	
CORRECT FINISH	Y <u>(Y)</u> N	
CORROSION	Y <u>(N)</u>	
CORRECT GRAIN DIRECTION	Y <u>(Y)</u> N	
CORRECT MATERIAL PER M-DRAWING	Y <u>(Y)</u> N	<u>ASTM A829</u>
CORRECT THICKNESS	Y <u>(Y)</u> N	
PHOTO REQUIRED	Y <u>(N)</u>	
CORRECT REF # TO LINK CERT	Y <u>(Y)</u> N	<u>HT:300536</u>
CORRECT MATERIAL IDENTIFICATION	Y <u>(Y)</u> N	
CORRECT M# ON THE MATERIAL	Y <u>(Y)</u> N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <u>(N)</u>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <u>(N)</u>	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING	HRC	HRB	DUR A	DUR D	WEBSTER

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>9-85</u>	SIGNED OFF BY: _____
DATE: <u>18/11/23</u>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

Chemical certification
Certification chimique

21547

Order Num / No. Commande AC-21547	Vendor / Fournisseur 46	Country of origin / Pay d'origine SLOVENIA	Date 07/15/18	Heat / coulée 304714	Material ID # / No. matériel
Grade / Nuance 4140 PLT	Conditions HEAT TREATED Q&T				
Shape / Forme FLAT	Size / Dimension 1.500	Specifications ASTM A829/A829M			

Chemical composition / Analyse chimique					
Carbon (C)	Silicon (Si)	Manganese (Mn)	Phosphorus (P)		
Mini / maxi 0.3700 / 0.4400	0.1500 / 0.3500	0.6500 / 1.1000	0.0100 / 0.0190		
Actuel % 0.420	0.219	0.759	0.009		
Sulphur (S)	Chromium (Cr)	Nickel (Ni)	Molybdenum (Mo)		
Mini / maxi 0.0200 / 0.0400	0.7500 / 1.2000	0.1000 / 0.2000	0.1500 / 0.2500		
Actuel % 0.001	1.010	0.140	0.230		
Cooper (Cu)	Vanadium (V)	Aluminum (Al)	Tungsten (W)		
Mini / maxi 0.1900 / 0.2900	0.0400 / 0.0500	0.0000 / 0.0000	0.0000 / 0.0000		
Actuel % 0.165	0.039	0.021	0.000		
Cobalt (Co)	Titanium (Ti)				
Mini / maxi 0.0000 / 0.0000	0.0000 / 0.0000	0.0000 / 0.0000	0.0000 / 0.0000	0.0000 / 0.0000	
Actuel % 0.000	0.000	0.000	0.000	0.000	
Mechanical properties / Propriétés Mécaniques					
Yield strenght / Élasticité	Tensile / Rés. à la traction	Elongation / Allon. (%)	Red. of area / Surface (%)	RC	Surface Hd / Dureté
0.000	PSI	0.000	PSI	0.00	300/312
					BHN

Note:

We certify that the above data has been verified and are conform to an original mill or supplier certificate supplied to us with the material

Nous certifions que les données ci haut on été vérifier et sont conformes d'après un certificat originale qui nous a été fourni par notre fournisseur.

M/

Prepared by: / Préparé par:

heat 304714

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL : AISI 4140 / 4142 STEEL SHEET OR PLATE
MINIMUM ROCKWELL C = 28 RC
MAXIMUM ROCKWELL C = 32 RC

SPECIFICATION.

PART III NUMBER:

ASTM A829, AMS 6395

MT-4140-S-[T.TTT] x [W.WWW]
 WHERE "T.TTT" = THICKNESS IN INCHES
 WHERE "W.WWW" = WIDTH IN INCHES

EX. 0.063" THICK SHEET = MT-4140-S-0.063
EX. 3.5" WIDE BY 0.500" THICK PLATE = MT-4140-S-0.500X3.500

REV	DESCRIPTION	ECN #	DATE	BY	APPROVED
A	NEW/ISSUE	18-544	18.2.13	VM	ML

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MT-4140-S-1.500 x 2.000
 DATE: 18/11/23

PO / BATCH NO.: P0041674/S131154

MATERIAL CERT REC'D: Yes
 QUANTITY RECEIVED: 8ft
 QUANTITY INSPECTED: 8ft
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 1.500"
 THICKNESS RECEIVED: 1.500"
 SHEET SIZE ORDERED: —
 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <u>N</u>	
CORRECT FINISH	Y <u>N</u>	
CORROSION	Y <u>N</u>	
CORRECT GRAIN DIRECTION	Y <u>N</u>	
CORRECT MATERIAL PER M-DRAWING	Y <u>N</u>	<u>ASTM A829</u>
CORRECT THICKNESS	Y <u>N</u>	
PHOTO REQUIRED	Y <u>N</u>	
CORRECT REF # TO LINK CERT	Y <u>N</u>	<u>HT: 304714</u>
CORRECT MATERIAL IDENTIFICATION	Y <u>N</u>	
CORRECT M# ON THE MATERIAL	Y <u>N</u>	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <u>N</u>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <u>N</u>	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING	HRC	HRB	DUR A	DUR D	WEBSTER

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>DA</u> <u>61</u> <u>9-89</u>	SIGNED OFF BY: _____
DATE: <u>18/11/23</u>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

ACIER OUELLETTE INC.

935, Boul. du Hâvre
Salaberry de Valleyfield (Québec) J6S 5L1
Tél.: 450-377-4248 Mtl: 514-336-4248 Ext.: 800-667-4248
Fax: 450-377-5696 Mtl: 514-336-4246 Ext.: 866-456-4242

DELIVERY - CLIENT

Copy
CO00122309

Billed to	Shipped to	
DART AEROSPACE LTD	1270 , ABERDEEN ST.	Customer N°
1270 , ABERDEEN ST.	HAWKESBURY, Ontario, K6A 1K7	Date
HAWKESBURY, Ontario, K6A 1K7		Delivery date
Att : LUSSIER Tel.: (613) 632-5200 X 730		Your order N°
Delivery Route	5	Processed by
Instruction	F-M	Salesman
		Carrier
		Credit Terme

Product Description	Weight	Qty	UM	PCS NB			Internal Use Only			
				CMD	EXP	B/O	IN	I	S	C
1 TUBE MEC 5.250 OD X .375 NS TME-5250375 12191 1 X 12' AC 25132-JG HEAT: 0110119	234.24	12.00	PI_ \$PI							

Note : ATTENTION: MILL TEST REQUIS**Total Weight (Lbs) :** 234.24**NIR :** R-109516-6**Conditions :**

All sold and delivered materials remain the property of "Acer Ouellette Inc" until payment is made in full, complete and cashed. All lost materials are at the buyer's expense. The warranty offered by "Acer Ouellette Inc." is the same as offered and honored by the manufacturer and his warranty is transferred by "Acer Ouellette Inc." to the client. The buyer hereby accepts to respect the following conditions: Net 30 days from billing date and the buyer accepts to pay administration charges of 2% per month (24% per annum) on all past due amounts over 30 days. Any default in respect with this contract will lead to payment by acceleration and permits to the seller, at his choice to claim for the balance due or the repossession of the goods sold. All claims must be made within five (5) days with this document enclosed. Any merchandise that has been damaged, cut or modified cannot be returned. All goods returned must be with our authorization and are subject to a 25% restocking charge.

Prepared By :	Verified By :	Delivered By :	Time

Customer's Signature	Y	M	D
	18	11	2017
Date			

100042
CERTIFICATE OF TEST
CERTIFICAT D'ESSAIS

21582N

Page 01 of 02

Certification Date
21-NOV-2018

CUSTOMER ORDER NUMBER
NUMÉRO DE COMMANDE DU CLIENT

Invoice Number
T386166

AC00021532

PART NUMBER/NUMÉRO DE PIÈCE

108425

SOLD TO: ACIER OUELLETTE INC. **SHIP TO:** ACIER OUELLETTE INC.
VENDU À: DIVISION SALABERRY DE VALLEYFIELD DIVISION SALABERRY DE VALLEYFIELD
935, BOUL. DU HAVRE 935, BOUL. DU HAVRE
SALABERRY-DE- VALLEYFIELD QC J6S 5L1 SALABERRY-DE- VALLEYFIELD QC J6S

Description: 1026 DOM SRA A513/5
5.250 OD X 4.500 ID S/C 12" 0" (144.0") Line Total: 12 FT
HEAT: 0110119 ITEM: 108425

Specifications:
ASTM A513 TP 5 14
DIN 50049

EN 10204 TYPE 3.1B
ASTM A513 S5

ISO 10474
ASTM A370

CHEMICAL ANALYSIS

C	MN	P	S	SI	AL	CU	NI
0.23	0.66	0.008	0.006	0.013	0.027	0.04	0.01
CR	MO	V	CA				
0.04	0.01	0.00	0.00				

RCPT: R627562

COUNTRY OF ORIGIN : USA

MECHANICAL PROPERTIES

DESCRIPTION	YLD STR PSI	ULT TEN PSI	%ELONG IN 02 IN	%RED IN AREA	HARDNESS RB
AR	77654.0	88942.0	23.48		87
E-MAIL	77654.0	88942.0	23.48		87
EE	77654.0	88942.0	23.48		87

GRAIN SIZE : 5

NOV. 2018

The above data were transcribed from the manufacturer's Certificate of Test after verification for completeness and specification requirements of the information on the certificate. All test results remain on file subject to examination. /Les informations ci-haut-mentionnées sont transcris du certificat d'essais du manufacturier après vérification de l'état complet des spécifications inscrites sur le certificat. We hereby certify that the material covered by this report will meet the applicable requirements described herein, including any specification forming a part of the description. /Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites ci-haut.

The willful recording of false, fictitious, or fraudulent statements in connection with test results may be punishable as a felony under federal statutes. /Les informations fausses, fictives ou frauduleuses en rapport avec le résultat des essais sont punissables en vertu des lois fédérales.

Material did not come in contact with mercury while in our possession./Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites ci-haut.

Joanne Despres

MANAGER QUALITY ASSURANCE
GÉRANT DE L'ASSURANCE QUALITÉ

Heat: 0110119

CERTIFICATE OF TEST

CERTIFICAT D'ESSAIS

Page 02 of 02

Certification Date
21-NOV-2018

CUSTOMER ORDER NUMBER
NUMÉRO DE COMMANDE DU CLIENT
AC00021532

Invoice Number
T386166

PART NUMBER/NUMÉRO DE PIÈCE
108425

SOLD TO:	ACIER OUELLETTE INC.	ACIER OUELLETTE INC.
VENDU À:	DIVISION SALABERRY DE VALLEYFIELD	DIVISION SALABERRY DE VALLEYFIELD
	935, BOUL. DU HAVRE	935, BOUL. DU HAVRE
	EXPÉDIÉ À:	
	SALABERRY-DE- VALLEYFIELD QC J6S 5L1	SALABERRY-DE- VALLEYFIELD QC J6S

Description: 1026 DOM SRA A513/5
5.250 OD X 4.500 ID S/C 12'0" (144.0")
HEAT: 0110119

Line Total: 12 FT

ITEM: 108425

STRAND CAST MATERIAL IS FREE FROM MERCURY CONTAMINATION
NO WELD REPAIR PERFORMED ON MATERIAL
EDDY CURRENT: YES
ULTRASONIC: YES

COMMENTS

melt mill severstal dearborn
melt country usa
melt practice basic oxygen
red. ratio > 6:1
dfars compliant yes

PAR E-MAIL LE 27 NOV. 2018

The above data were transcribed from the manufacturer's Certificate of Test after verification for completeness and specification requirements of the information on the certificate. All test results remain on file subject to examination. /Les informations ci-haut-mentionnées sont transcris du certificat d'essais du manufacturier après vérification de l'état complet des spécifications inscrites sur le certificat. We hereby certify that the material covered by this report will meet the applicable requirements described herein, including any specification forming a part of the description. /Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites ci-haut.

The willful recording of false, fictitious, or fraudulent statements in connection with test results may be punishable as a felony under federal statutes. /Les informations fausses, fictives ou frauduleuses en rapport avec le résultat des essais sont punissables en vertu des lois fédérales.

Material did not come in contact with mercury while in our possession./Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites ci-haut.


JOANNE DESPRES

MANAGER QUALITY ASSURANCE
GÉRANT DE L'ASSURANCE QUALITÉ

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: ASTM A513 TYPE 5 (1020/1026) SEAMLESS ALLOY STEEL ROUND TUBING (DOM)

SPECIFICATION:

ASTM A513 TYPE 5

PART NUMBER: MT-A513-T-[D.DDD]W[T.TTT]

WHERE D.DDD IS OUTSIDE DIAMETER IN INCHES

WHERE T.TTT IS WALL THICKNESS IN INCHES

EG. 3/4" ROUND TUBING WITH .120" WALL THICKNESS = MT-A513-T-0.75W0.120

D		C		B		A	
1	2	3	4	5	6	7	8
REV.	DESCRIPTION	ECN #	DATE	BY	APPROVED		
A	NEW RELEASE	11-655	17-09-06	VM	VM		
B	TYPE 5 ADDED, TEMPLATE UPDATED	17-780	17-12-13	VM	ML		
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MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MT-A513-T-5.250W0.375
 DATE: 18/11/27

PO / BATCH NO.: P004674/S132038

MATERIAL CERT REC'D: Yes
 QUANTITY RECEIVED: 124
 QUANTITY INSPECTED: 124
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 5.250"
 THICKNESS RECEIVED: 5.250"
 SHEET SIZE ORDERED: —
 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	<u>Y</u> <u>N</u>	
CORRECT FINISH	<u>Y</u> <u>N</u>	
CORROSION	<u>Y</u> <u>N</u>	
CORRECT GRAIN DIRECTION	<u>Y</u> <u>N</u>	
CORRECT MATERIAL PER M-DRAWING	<u>Y</u> <u>N</u>	<i>ASTM A513 Type 5</i>
CORRECT THICKNESS	<u>Y</u> <u>N</u>	
PHOTO REQUIRED	<u>Y</u> <u>N</u>	
CORRECT REF # TO LINK CERT	<u>Y</u> <u>N</u>	<i>MT-0110119</i>
CORRECT MATERIAL IDENTIFICATION	<u>Y</u> <u>N</u>	
CORRECT M# ON THE MATERIAL	<u>Y</u> <u>N</u>	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	<u>Y</u> <u>N</u>	
DOES THIS REQUIRE AN EXTRUSION REPORT	<u>Y</u> <u>N</u>	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING	HRC	HRB	DUR A	DUR D	WEBSTER

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>61</u> <u>9-89</u>	SIGNED OFF BY: _____
DATE: <u>18/11/27</u>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

120175

Dart.

Chemical certification

Certification chimique

21547N

Order Num / No. Commande AC-21547	Vendor / Fournisseur 29	Country of origin / Pay d'origine USA	Date 01/05/18	Heat / coulée L8121	Material ID # / No. matière
Grade / Nuance 4140 RD	Conditions				
Shape / Forme RD	Size / Dimension 9.000	Specifications ASTM A29-15			

Chemical composition / Analyse chimique

	Carbon (C)	Silicon (Si)	Manganese (Mn)	Phosphorus (P)
Mini / maxi	0.3700 / 0.4400	0.1500 / 0.3500	0.6500 / 1.1000	0.0000 / 0.0000
Actuel %	0.410	0.270	0.970	0.012
	Sulphur (S)	Chromium (Cr)	Nickel (Ni)	Molybdenum (Mo)
Mini / maxi	0.0000 / 0.0000	0.7500 / 1.2000	0.0000 / 0.0000	0.1500 / 0.2500
Actuel %	0.027	0.940	0.130	0.200
	Cooper (Cu)	Vanadium (V)	Aluminum (Al)	Tungsten (W)
Mini / maxi	0.0000 / 0.0000	0.0000 / 0.0000	0.0000 / 0.0000	0.0000 / 0.0000
Actuel %	0.260	0.000	0.034	0.000
	Cobalt (Co)	Titanium (Ti)		
Mini / maxi	0.0000 / 0.0000	0.0000 / 0.0000	0.0000 / 0.0000	0.0000 / 0.0000
Actuel %	0.000	0.000	0.000	0.000

Mechanical properties / Propriétés Mécaniques

Yield strenght / Élasticité	Tensile / Rés. à la traction	Elongation / Allon. (%)	Red. of area / Surface (%)	RC	Surface Hd / Dureté
800.200	PSI	116.144	PSI	18.30	40.00

Note:

We certify that the above data has been verified and are conform to an original mill or supplier certificate supplied to us with the material

Nous certifions que les données ci haut on été vérifier et sont conformes d'après un certificat originale qui nous a été fourni par notre fournisseur.

M

Prepared by: / Préparé par:

heat: L8121

SPECIFICATION CONTROL DRAWING

1	2	3	4	5	6	7	8
REV. A							

PURCHASE MATERIAL : AISI 4140 ROUND BAR
 MINIMUM ROCKWELL C = 20 Rc
 MAXIMUM ROCKWELL C = 38 Rc

SPECIFICATION: ASTM A29, AMS 6349, AMS 6382, AMS 6529

PART NUMBER: MT-4140-R-[D,DDD]
 WHERE "D,DDD" = DIAMETER IN INCHES
 EX. 4" ROUND BAR = MT-4140-R-4.000

A	DART AEROSPACE		A
Title		AISI 4140 ROUND BAR	
Part No.		MT-4140-R	
Drawing Control Specification			
Initials and Date			
Drawn by:		VA 17/12/17	
Checked by:		ML 12/19/2017	
WFO Review by:		DF 12/20/2017	
Approved by:		ML 12/20/2017	
Scale: INTS. Sheet 1 of 1			
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MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MT-4140QT-R9.00
 DATE: 18/11/26

PO / BATCH NO.: P0041674/5131155

MATERIAL CERT REC'D: Yes
 QUANTITY RECEIVED: 2.25ft
 QUANTITY INSPECTED: 2.25ft
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 9.00"
 THICKNESS RECEIVED: 9.00"
 SHEET SIZE ORDERED: —
 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <u>(N)</u>	
CORRECT FINISH	<u>(Y)</u> N	
CORROSION	Y <u>(N)</u>	
CORRECT GRAIN DIRECTION	<u>(Y)</u> N	
CORRECT MATERIAL PER M-DRAWING	<u>(Y)</u> N	<u>ASTM A29</u>
CORRECT THICKNESS	<u>(Y)</u> N	
PHOTO REQUIRED	Y <u>(N)</u>	
CORRECT REF # TO LINK CERT	<u>(Y)</u> N	<u>MT: L8121</u>
CORRECT MATERIAL IDENTIFICATION	<u>(Y)</u> N	
CORRECT M# ON THE MATERIAL	<u>(Y)</u> N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <u>(N)</u>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <u>(N)</u>	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING	HRC	HRB	DUR A	DUR D	WEBSTER

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>61</u> <u>0-89</u>	SIGNED OFF BY: _____
DATE: <u>18/11/26</u>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in